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## ORIGINAL COMMUNICATIONS.

### THE CLINICAL HISTORY OF CHANCRE AND CHANCROID.

*Report of Verbal Remarks made before the Philadelphia  
County Medical Society, November 23, 1881,*

BY JOHN ASHHURST, JR., M.D.

IN discharging the duty assigned me of opening the discussion upon syphilis, I find that the subject which by especial appointment I am to consider is the clinical history of chancre and chancroid; and I feel that it is incumbent upon me, in the first place, to define what I mean by the terms employed. By *chancroid*, the soft chancre, non-infecting chancre, simple sore, or *chancrille* of the French, I mean a local contagious ulcer, which results from contact with the secretion of a similar sore or ulcer, whether upon the same or another person. By chancre I mean, as do most authors in England and in this country, the initial lesion of syphilis. As I understand the question placed before me, the words "clinical history" imply that something more is expected and required of me than the mere setting forth of the points of difference between these two affections; and some reference to their clinical course and pathology will be necessary. Some of these more salient points I will now briefly mention.

Chancroid is a strictly local disease, derived, as I have said, from contact with the secretion of a similar sore, either on the same or another person. It is but fair that I should say that a different view is entertained upon this subject by several excellent writers. Thus, Dr. Wigglesworth, of Boston, believes that the chancroid has no specific character at all, but is simply the result of inoculation of ordinary pus, and thinks that he has proved this by inoculations upon his own person. Kaposi entertains similar opinions; and the late Dr. Bumstead, of New York, adopted the same view before his death. There is another view which must be referred to, advocated by Clerc, a French author, that chancroid is the result of the action of the syphilitic poison upon a person already affected by syphilis, or, in other words, that in a patient suffering from syphilis an in-

oculation with syphilitic virus will produce a chancroid.

For my own part, I cannot subscribe to either of these doctrines, but, as I have already said, believe on the one hand that the chancroid results exclusively from contagion from a similar sore, and, on the other hand, that it has no pathological relations with syphilis. It will be impossible to discuss this question without some reference to the past history of the two diseases.

Chancroid was well known to the ancients, references to local venereal ulcers being found both in Greek and Roman literature. Chancroid was probably as frequent among the ancients as it is in modern times. On the other hand, there is no reference found to syphilis, which apparently originated in the fifteenth century; whether arising among the troops in the French wars, or by importation from America, or otherwise, I will not now stop to consider; and, indeed, the most judicious syphilographers refuse to pronounce positively upon this point, the whole matter being still involved in doubt.

Chancroid may occur in any part of the body. This also has been denied. When I was a student it was ordinarily taught that chancre and chancroid were essentially the same; but the rare occurrence of chancroid in the face was a fact that it was very difficult to explain. It was not understood at that time that syphilis could be acquired by contact with secondary lesions, and it was supposed that the buccal or lingual chancre could only occur as the result of a form of sexual intercourse which I need not more particularly refer to. But, the chancroid being much more common than the chancre, why was it that those who indulged in this mode of intercourse acquired the comparatively rare instead of the more common disease? The explanation is now known to be that the buccal chancre results from contact with *secondary* syphilitic lesions, usually mucous patches, in the mouth of the infecting person, or even by mediate contagion,—through spoons or utensils of various kinds,—and thus may be met with in perfectly pure-minded and innocent persons. Though, however, very rare, the cephalic chancroid does occur; and there are at least five cases on record in which this disease has been acquired by the ordinary

method of contagion (Puche, Rofeta, Diday, Labarthe, R. W. Taylor). But, though this variety of venereal sore may appear in any portion of the body, it is more particularly seen about the preputial fold, corona glandis, frænum, and meatus urethræ in man, and in woman most commonly on the nymphæ and os uteri.

The chancroid has no true period of incubation. There is, of course, a variable time required for the poison to penetrate the skin; but, when artificially inoculated, the chancroid makes its appearance within a few hours. Acquired by the ordinary methods of contagion, its appearance is more rapid when there is a crack or fissure than when the skin is unbroken; and it occurs more quickly when the poison is deposited upon a soft, thin skin, passing through by maceration and absorption, or when a mucous membrane is involved, than when contagion is effected through a comparatively hard or thick skin. When first observed, the chancroid appears as an elevated pimple or papule with a red areola. It generally makes its appearance on the second or third day after impure intercourse. Subsequently it becomes vesicular and pustular, or it may form a scab and ulceration occur underneath. The stage of ulceration is reached in from four to six days after exposure. If the matter of the chancroid be deposited in a fissure or on an abraded surface, its development, as already intimated, may be much earlier; it may then present the ulcerative stage first; but usually from four to six days elapse before the disease is fully developed; and this period is sometimes much longer. As a general rule, it may be said that a venereal sore which appears within a week or ten days is probably chancroidal. I say "probably," because the most skilful observers may not always be able to decide this question in exceptional cases. The ulcer varies in size from a line to half an inch, or may even appear larger from the coalescence of several sores; but it is rare to have a single chancroid larger than half an inch. It is not adherent to the neighboring tissues, and there is no surrounding induration. The sore has a peculiar punched-out appearance, with overhanging edges, very different from the sloping edge which is characteristic of true chancre. The bottom of the ulcer is covered with an adherent grayish slough. This, then, would be the ordinary appearance of a chancroid,—first

papular, then pustular, and finally ulcerating. The primary areola does not continue throughout the entire course of the chancroid. The secretion is *auto-inoculable*,—by which I mean that the pus is inoculable upon the person who bears the original sore. Any venereal sore is inoculable upon a fresh subject; but this only has the character of auto-inoculability. The multiplicity of chancroid is due to this cause. The original sore may be upon the prepuce, but other sores may appear on the glans, upon the thighs, or wherever the pus may flow. A very large number of chancroids are formed in this way, especially in females, on the perineum, on the buttocks, around the anus, etc. The chancroid, therefore, is usually multiple, not necessarily from the first, but as a consequence of this property of auto-inoculability. This question has been investigated by Fournier, who found eighty per cent. multiple, about twenty per cent., or one-fifth, single. There may be a certain amount of surrounding hardness, caused by inflammation or by irritating applications; but this is to be distinguished from the induration of chancre. It fades away, as it were, gradually into the surrounding structures, and this makes the chancroid in a measure adherent to the neighboring tissues. The sensation communicated to the finger is very different from the distinct foreign-body-like feel of the true chancre.

Chancroid is very commonly accompanied by *bubo*,—not always a *chancroidal* bubo, but often one due to simple irritation,—an *inflammatory* bubo. In some cases, however, there is a true chancroidal bubo, due to direct absorption of the virus by the lymphatic channels and to its introduction into the interior of the lymphatic glands. The chancroidal bubo has an almost irresistible tendency to suppuration. The inflammatory bubo may be made to disappear by resolution; but I doubt if resolution is ever effected in a true chancroidal bubo. The suppuration is at first, however, rather *periglandular* than glandular. Not infrequently, when the bubo has been opened, an enlarged gland may be found protruding from the wound. In such cases much good can be done by enucleating the diseased gland and thus preventing the spread of the poison in the neighboring tissues. But if the gland is allowed to become disintegrated in the wound, it will inoculate the

entire surface, and then we may have the whole ulcer converted into a huge chancroid, the treatment of which is slow and tedious alike to physician and patient.

The bubo, in cases of chancroid, generally appears from the fourth to the sixth week, but may not occur until a much later period. M. Puche has reported a case of chancroidal bubo occurring three years after inoculation. Chancroidal buboes are usually single; that is to say, a single gland is affected at a time; though, if left to itself, the original gland will suppurate and the poison then extend to other glands; but at first the disease is restricted to a single gland, and, moreover, it is confined to one side, usually corresponding to the side on which the sore exists. Sometimes, however, it is upon the opposite side, due to the interlacement of lymphatics upon the dorsum of the penis, or, in cases of multiple chancroid, both groins may be involved. The peculiarities of the chancroidal bubo may then be summed up as follows: it is (1) unilateral, (2) monoganglionic, and (3) it generally tends to suppuration.

There are certain complications which may be met with in chancroid, some not peculiar to this disease, but occurring also in simple inflammatory conditions. The first which I shall mention is the presence of *warts*, or *vegetations*. They are not necessarily of venereal origin, but may be due simply to want of cleanliness. They are, however, contagious, being conveyed just as warts on the hand are sometimes communicated, by contact. They are usually seen on mucous surfaces, or where the skin is kept moist, as on the glans in cases of elongated prepuce. Other complications are phimosis and paraphimosis, or the chancroid may coexist with other forms of venereal disease. In some examples of balanitis it is difficult to decide whether the case is one of simple "external gonorrhœa," with consecutive ulceration, or whether the ulcerations are really chancroidal. True chancre may also coexist with chancroid, the diseases being acquired either by the same or by consecutive exposures.

Then there are the *phagedænic* and *serpiginous* forms of chancroid. Phagedæna, which may cause considerable loss of tissue, is often due to the previous existence of syphilis or to other causes of constitutional depression. It has also been attributed to

the abuse of mercury. The appearance of the slough in cases of phagedænic chancroid is well compared by Dr. Barton, an Irish surgeon, to "melted tallow." Phagedæna may also attack a chancroidal bubo, or there may be a serpiginous (or creeping) chancroid or a serpiginous bubo. Some years since, I saw a case of serpiginous bubo which had lasted for several years, and which proved utterly rebellious to treatment. There are even cases on record in which this form of the disease has lasted for ten years.

This may terminate the clinical history of *chancroid*. Let us now turn to that of the *chancre*. In the first place, it may be noticed that a chancre may be derived from several sources. It may be derived from a similar sore, and for many years it was believed that this was its only source; but it is now known that it may also be derived from secondary lesions. Another source is syphilitic blood. This source of contagion is seen in cases of vaccino-syphilis, which are due to the admixture of blood from a syphilitic person with the vaccine virus, and are more frequent where arm-to-arm vaccination is practised than where the scab is used, as is more commonly done in this country. Another way in which syphilis may be communicated by the blood is when a man has intercourse with a syphilitic woman during her menstrual period. This point has been particularly insisted upon by Dr. Hyde, of Chicago. Chancre may then be derived from these three sources,—(1) another chancre, (2) a mucous patch or other secondary lesion, and (3) the blood. I am not disposed to believe that syphilis can be conveyed through any of the natural secretions. Formerly it was supposed that it could be conveyed by secretions, or even through the air. Some syphilographers believe that syphilis may be conveyed by the milk, saliva, and semen. Undoubtedly many cases of chancre come from fluids of which the saliva forms a part; but the real source of infection is the discharge from mucous patches in the mouth. Similarly, syphilis may be apparently communicated through the milk. Many an infant is inoculated by a syphilitic nurse; but the source of contagion is not the milk, but a mucous patch on the nurse's breast, or syphilitic blood from a fissured nipple. It is said, again, that the seminal fluid must be capable of conveying syphilis,

because a man may have a syphilitic child when the mother has no appearance of syphilis. I believe that in this case the mother has really become syphilitic, although she may show no outward manifestations of the disease. It was long ago pointed out by an eminent Irish surgeon, Dr. Colles, that while a stranger could not, yet a mother could, nurse a child with syphilitic sores upon its mouth, without herself getting syphilis. The only explanation of this is that the mother is herself already syphilitic. It is quite possible for a woman to have a mild form of syphilis, which is not recognized, and which yet serves to protect from further infection. We constantly see the same thing in the case of scarlet fever and other exanthemata. In regard to the contagiousness of semen, M. Mireur, a French surgeon, has inoculated semen free from blood and pus, and found no syphilis produced. Of course this is negative evidence, but, as far as it goes, it is valuable. Similarly negative results were obtained from the inoculation of milk, in the hands of Pardo, an Italian surgeon.

Syphilis also is conveyed by *mediate* contagion, as by glass-blowers' tubes being passed from hand to hand: one man having a syphilitic mouth, a number are infected. In the same way a syphilitic cook, tasting the food which she is preparing from time to time with a spoon, may convey the poison. Syphilis has also been inoculated by tattooing, as in cases reported by M. Josias, and by the late Dr. Maury and Dr. Dulles, of this city.

Chancre has a decided period of incubation. Nothing is seen for a number of days after inoculation: usually from ten to twenty days, the period of inoculation may be six or seven weeks. It is safe to say, in general terms, that if a venereal sore appears before ten days have elapsed, it is probably (not certainly) a chancroid; if after ten days, it is probably (not certainly) a chancre. Cases have, however, been reported by Dr. Hammond and Dr. Taylor in which the chancre has appeared within two or three days after exposure. Dr. Otis, of New York, has explained this by variations in the locality of the inoculation. If this is near a lymph-channel, the poison is more rapidly absorbed than under opposite circumstances. This period of incubation marks the chancre as being the first symptom of a constitutional affec-

tion. It differs in this respect from the chancroid.

The first lesion of syphilis acquired in the ordinary way is invariably a chancre. In inherited syphilis, however, there is no primary stage, but secondary lesions are the first to appear.

Concerning the form of chancres, a large proportion of them occur as *superficial erosions*, appearing after an incubation of from three to five weeks, or even longer. There is first a reddish-brown papule, with an ulcerated spot or scab in the centre. The shape of the chancre is circular or elliptical, and its edges are sloping, but less so than in the Hunterian chancre. The surface of the ulcer is red, and there is little or no pus, except as the effect of irritating applications or want of cleanliness. Anything that causes irritation may increase suppuration. There is beneath the sore a peculiar *induration*,—another point of difference between the chancre and chancroid. In this superficial form we have a *parchment-like* induration, which may last only for a short time, and is very slight in chancres on mucous membrane, and which may therefore entirely escape observation, especially in females.

The *Hunterian chancre* presents some points of difference from that already described. As a rule, the incubation is shorter,—from ten to fourteen days. Its appearance is that of a deep excavated ulcer, with sloping edges and marked "split-pea" induration. This term was used by Benjamin Bell to indicate the size and not the character of the induration, but it applies very well to both. This induration usually makes its appearance a little after the chancre, but sometimes before. In the large majority of cases it occurs, according to Sigmund, from the ninth to the fourteenth day after exposure.

The chancre differs from the chancroid in usually being *solitary*, though we may have several chancres, from a simultaneous multiple inoculation, just as in vaccination; but, as a rule, chancre is solitary, chancroid is multiple. The chancre is not of itself auto-inoculable; but when the chancre is irritated in any way, a suppurating auto-inoculable sore may be produced. Experiments have been made, as in the process of "syphilization," which prove that the inoculation of chancre upon a syphilitic person may produce an ulcer often indistinguishable from chancroid;



and other experiments by Pick, Morgan, Krause, and Lee show that precisely similar sores may be produced by inoculation of syphilitic subjects with ordinary pus. But it is by no means shown that these sores are really chancroids; and, however closely they may resemble them, their course and natural history are quite different.

The chancre, unless attacked by phagedæna, usually heals of itself in the course of a few weeks or months. It is sometimes converted into a mucous patch by an interesting process, which, however, it would be beyond the limits of the subject assigned me to consider.

The bubo of chancre is a symptom of the first stage of syphilis. It is bilateral and polyganglionic. Very often it happens that one gland is larger than the rest, and we then have what the French call a "pléiade ganglionnaire." These buboes do not tend to suppuration, unless irritated. They undoubtedly do suppurate; but this complication is due either to a scrofulous taint or to extraneous irritation. It is an accident, and does not belong to the disease as it does to chancroid. The duration of a syphilitic bubo may be very protracted: it may last a few months or it may last many years. It has been maintained by Mr. Venning that as long as induration remains in the inguinal glands the patient is syphilized, and cannot again contract the disease. This leads me to say, in conclusion, in regard to second attacks of chancre and chancroid, that, while a man may have any number of attacks of chancroid, most men can have only one attack of syphilis, a second being as rare as a second attack of smallpox. There is a mistake often made in this matter which deserves correction. Fourrier has described a condition which he calls an "indurated pseudo-chancre," which is really a late constitutional lesion. Just as we have the locality of a syphilitic lesion determined by any injury,—a broken leg, for instance,—so, from some irritation, there may be re-induration in the seat of an old chancre; and this may be readily mistaken for the result of a fresh infection. Again, a gumma, developed on the site of an old chancre, may be readily mistaken for a new one. But a man may pass through all the stages of the disease, and, all symptoms having disappeared, he may get a fresh attack.

I have in this brief outline endeavored

to point out not only the diagnostic points between chancre and chancroid, by which they can in the vast majority of cases be distinguished, but have also endeavored to trace their clinical history so as to show that they pursue an entirely different course.

## THE RELATION OF SYPHILIS TO SCROFULA.

*Read before the Philadelphia County Medical Society, November 23, 1881,*

BY JOHN B. ROBERTS, M.D.,

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IT is my intention this evening to discuss the evidence for and against the assumption that syphilis is the progenitor of scrofula. This I believe to have been the wish of the directors when assigning me the subject that serves as a title to my remarks.

Before attempting to depict the relationship between these diseases, it is necessary that I accurately define the terms. By syphilis I mean the constitutional affection due to inoculation with the virus of hard chancre, excluding the local disease called chancroid, or soft chancre. I of course make no allusion to gonorrhœa, which is not syphilis, and, in my opinion, not even specific.

The term scrofula is used to designate that constitutional condition that tends to the deposition of gray tubercles. The liability to such deposition may exist without any deposit of tubercle having occurred: therefore a man may be scrofulous without being actually tuberculous.

The pathological lesions due to constitutional syphilis closely resemble the effects of chronic inflammation, and may be grouped under these heads: 1, fibroid degenerations; 2, gummy tumors; 3, changes in the arterial walls. The fibrous indurations are found in small areas, surrounded by normal tissue, and occur in periosteum, sheaths of nerves, of organs, and in muscles. Gummy tumors are firm yellowish masses, and consist of granular, fatty, and other material due to degenerated cell-products, surrounded by a fibrous zone, which in turn is encircled by a cellular and vascular area, intimately blended with the adjacent tissues. *They often become caseous on account of progressive degeneration*

of their interior. Gummy tumors are the most characteristic formations of syphilis, and are found in the cellular tissue, muscles, fasciæ, bones, and internal organs. Syphilitic changes in arterial walls cause diminution of calibre, leading to interference with circulation; and thus possibly have a causative relation to cheesy degeneration.

Scrofula, as previously stated, is the diathesis which tends to the production of minute inflammatory growths called gray or miliary tubercles. These tubercles, according to present pathological views, are the result of infection from an inflammatory focus, which usually, though not necessarily, has undergone caseous degeneration. The infective process in the great majority of instances, however, *does* occur from some such caseous centre. It must be remembered, also, that gray tubercle itself may undergo cheesy degeneration, as indeed may any structure with little vascularity and abundance of cells. Hence cheesy tubercles may act as secondary caseous centres of infection.

As tubercle results from inflammatory products inducing infection, those are most liable to become tuberculous who are prone to inflammatory affections characterized by chronicity and by products tending to caseation. They would therefore be called, according to my use of the word, scrofulous. If the tendency to such inflammations is inherited, the case is one of hereditary scrofula, which is the usual form; but a chronic inflammation may cause infection and tubercular deposition in one who has not previously shown any caseous degenerative changes. Thus arises acquired scrofula.

It has been asserted, and by no one more forcibly than by one of the ex-Presidents of this Society, that syphilis is the usual, if indeed not the invariable, cause of scrofula; which, according to this view, is merely hereditary syphilis presenting modifications due to remoteness of origin.

I shall at first present the best evidence that can be offered in support of this doctrine, then state the most cogent objections thereto, and finally give an opinion founded on what I have endeavored to make an unprejudiced analysis of the evidence presented.

Let us study the affirmative side of the question.

I. Syphilis and scrofula undoubtedly show a tendency to affect similar structures, as is proved by the many diseases, formerly classified as scrofulous, now known and admitted to be inherited syphilis. In fact, those who hold that the two affections are distinct are obliged to admit that it is sometimes impossible to determine, from symptoms, or even from the antecedent history obtainable, which disease is responsible for the lesions exhibited.

II. Scrofula has been, and is, most common at times of life, in historic periods, and in countries in which syphilis is known to have been and to be prevalent and virulent. Again, scrofulous diseases are less prominent and more benign at the present day than formerly, when acquired syphilis was more destructive, because less judiciously treated.

III. It is so well known that syphilitic parents have, as a rule, syphilitic children, that an exception gives rise to scientific comment. Scrofula is usually an inherited condition, and could readily therefore be due to such a wide-spread and prolific parentage as syphilis.

IV. Scrofulous affections are found in the highest stations of life,—a fact which would be wellnigh inexplicable if scrofula were the resultant of exposure, insufficient food, filth, and bad air. If it be a grandchild of syphilis, however, its presence in every household can be as general as the immorality that gives birth to its ancestor.

V. Cases occur similar to that reported by Lugol, who refers to a family of two healthy children, the father of whom subsequently contracted syphilis and inoculated his wife. A third child was born, who, after exhibiting many scrofulous symptoms, died at eighteen years, though the elder brother and sister presented no such conditions of ill health.

VI. Acquired syphilis has been accused of awakening scrofulous manifestations in those, predisposed to scrofula, in whom no symptoms have occurred for years. This suggests a relationship between the affections which is very intelligible if scrofula be viewed as a remotely inherited syphilis.

VII. Scrofula is the condition furnishing deposits of tubercle, which are the result of infection arising especially from cheesy accumulations. Syphilis is an incessant instigator of inflammations and of gummy tumors which frequently undergo caseous degeneration. Hence pathology points

at syphilis as an agent well calculated to give birth to the scrofulous diathesis.

VIII. The most effectual remedies in the treatment of syphilis, whether acquired or inherited, are mercurials and preparations containing iodine. These so-called specifics in the management of syphilis are agents of greatest benefit in alleviating scrofulous manifestations.

The arguments of those denying the syphilitic parentage of scrofula may be summarized as follows:

I. Scrofula is not inoculable, as are the primary, the secondary, and sometimes the inherited lesions of syphilis.

II. The successive steps between primary syphilis in the progenitor and scrofulous diseases in the posterity have not been traced by any scientific investigators; who quote only isolated cases of apparent relationship.

III. Scrofulous affections are found in patients who have presented no such manifestations in early life (when inherited syphilis is especially noticeable), who have had neither scrofulous nor syphilitic parentage, and who have never acquired primary syphilis. Moreover, phthisis, which is a lesion of scrofula, is found very frequently in animals not known to have syphilis.

IV. Scrofula is not considered a factor in the causation of syphilis, as might be expected if there was a mutual relationship between them.

V. Scrofula is believed by some to have existed in Europe before the advent of syphilis, and according to certain writers is now prevalent in countries where syphilis is rare.

VI. Syphilis yields more quickly and completely to treatment than scrofula, though the same or similar remedies may be available in both diseases.

Such are the arguments of the advocates and of the opponents of the syphilitic origin of scrofula. The affirmative side seems to me to present more points that are generalizations, and, at the same time, to offer greater difficulties for its opponents to meet. The negative arguments are weakened by the facts,—1, that most animal poisons become weakened when passed through several subjects, and that there is evidence pointing to the possibility of scrofulous disease being transferred from one person to another; 2, that the links of the chain must be imperfect when the period

of hereditation and differentiation requires probably several generations; 3, that it is admitted even by the affirmative side that scrofula may arise from ordinary inflammations, and hence may occur in animals as well as in a non-syphilized man; 4, that many causes in nature cannot assume the rôle of effects; 5, that statistical evidence is proverbially subject to errors; and, 6, that the relative time of therapeutic influences depends more on the tissue-changes produced than on the etiological agency.

A survey of the field has led me to the conclusion that vast numbers of cases of so-called scrofulous disease are the direct result of inherited syphilis, but that, until pathology ascribes the tuberculous diathesis to a *special* and not a mere inflammatory infection, it is illogical to deny that acquired, and therefore also hereditary, scrofula may, and at times does, arise from absolutely non-syphilitic precedents.

While admitting the last clause of the above paragraph, however, I assert that the thought and investigation resulting from my appointment to speak to-night upon the relation of syphilis to scrofula have converted me from an indifferent believer, and perhaps doubter, in this relationship, to an earnest advocate of the doctrine that syphilis is undoubtedly the cause of nearly all cases of *hereditary* scrofula.

1118 ARCH STREET, PHILADELPHIA.

## AN ANALYSIS OF SEVEN HUNDRED AND FIFTEEN CONSECUTIVE CASES OF SKIN DISEASES.

BY H. W. STELWAGON, M.D.

**D**URING the year 1881, seven hundred and fifteen cases of skin diseases were recorded at the clinics of the Philadelphia Dispensary for Skin Diseases and the special service of the Northern Dispensary. In this number were noted fifty diseases. Several of these, however, might be classed under one affection, but, for the purpose of simplification, they are given individual mention.

The table merely shows the number of cases of each disease recorded, together with the percentages. As regards age and sex, the number of cases is scarcely great enough to render an analysis of such points of any particular value. For comparison,

the cases (653) of the preceding year\* are placed in an adjacent column: so that the whole table really represents one thousand three hundred and sixty-eight cases observed.

Diseases.	1881.		1880.	
	Number of cases.	Per cent.	Number of cases.	Per cent.
Eczema.....	268	37.5	195	29.9
Syphiloderma.....	49	6.9	68	10.4
Acne.....	35	4.9	20	3.1
Pruritus cutanea.....	25	3.5	24	3.7
Phtheiriiasis.....	25	3.5	30	4.6
Urticaria.....	24	3.4	40	6.1
Furunculul.....	24	3.4	14	2.1
Dermatitis.....	19	2.7	26	4
Seborrhoea.....	19	2.7	10	1.5
Erythema multiforme.....	19	2.7	13	2
Impetigo contagiosa.....	19	2.7	21	3.2
Psoriasis.....	16	2.2	24	3.7
Acne rosacea.....	15	2.1	10	1.5
Scabies.....	14	2	11	1.7
Ulcus.....	14	2	22	3.4
Herpes facialis.....	10	1.4	3	0.46
Miliaria.....	9	1.3	10	1.5
Varicella.....	9	1.3	...	...
Abscess.....	9	1.3	...	...
Purpura.....	8	1.1	4	0.61
Tinea circinata.....	7	1	10	1.5
Tinea versicolor.....	7	1	19	2.9
Herpes zoster.....	7	1	16	2.4
Paronychia.....	5	0.7	...	...
Erythema.....	5	0.7	3	0.46
Vitiligo.....	4	0.56	3	0.46
Ecthyma.....	4	0.56	2	0.31
Impetigo.....	4	0.56	12	1.8
Tinea sycosis.....	3	0.42	1	0.15
Scrofuloderma.....	3	0.42	2	0.31
Comedo.....	3	0.42	2	0.31
Alopecia.....	3	0.42	1	0.15
Chloasma.....	3	0.42	...	...
Rötheln.....	3	0.42	...	...
Erysipelas.....	3	0.42	...	...
Tinea tonsurans.....	3	0.42	4	0.61
Sycosis, n. p.....	2	0.28	10	1.5
Verruca.....	2	0.28	7	1.1
Lupus vulgaris.....	2	0.28	1	0.15
Variola.....	2	0.28	...	...
Tinea favosa.....	1	0.14	4	0.61
Hyperidrosis.....	1	0.14	4	0.61
Lichen planus.....	1	0.14	2	0.31
Epithelioma.....	1	0.14	2	0.31
Dysidrosis.....	1	0.14	1	0.15
Lupus erythematosus.....	1	0.14	1	0.15
Milium.....	1	0.14	1	0.15
Telangiectasis.....	1	0.14	...	...
Pityriasis maculata.....	1	0.14	...	...
Keratosis pilaris.....	1	0.14	1	0.15
Total.....	715			
Herpes iris.....			2	0.31
Atrophy of nails.....			2	0.31
Hypertrophy of nails.....			1	0.15
Morphea.....			1	0.15
Alopecia areata.....			1	0.15
Xanthoma.....			1	0.15
Steatoma.....			1	0.15

Taking this table as the basis of the report, and recapitulating, so to speak, with the addition of a few explanatory notes, and of brief mention of interesting points, the following remarks are evolved:

\* For a detailed report of the cases for 1880, see *Medical and Surgical Reporter* for April 23, 1881.

Under the heading *eczema* are found two hundred and sixty-eight cases,—more than thirty-seven per cent. This is higher by seven and one-half per cent. than shown in the analysis of cases for 1880. Examples of the acute disease were rare, the vast majority of them being of several months' standing, and some of years' duration. In about half the number the disease was seated exclusively on exposed parts. These parts also were frequently implicated in cases in which the disease was more general. As heretofore, old *eczema rubrum* of the legs was largely represented. Males and females were affected about alike. One-third of the patients were under the age of ten years, thirty under one year. The youngest patient was aged eighteen days, the oldest past eighty years. It was by far more frequently observed in those of a light complexion. The general health of patients seemed fair; the almost constant coexistence of digestive disturbance, however, was noticeable.

The *syphiloderma* numbered forty-nine cases, or seven per cent.,—a proportion of three and one-half per cent. less than the last year.

Most of these cases—at least, a few more than half—were illustrative of the earlier secondary eruptions; the remaining cases, of the later localized eruptions. Seventeen of the cases of the later forms showed the tubercular eruption. This was localized in character, and had the peculiar circinate and segmentary arrangement of the tubercles. In some of these there was ulceration, but with the greater number this feature was absent. Several well-marked cases of the papulo-squamous syphiloderma were observed. In one of these iritis supervened. This was the only case in which this complication was noted. The general pustular eruption was seen in but two instances.

In a large proportion of the patients, especially in those suffering with the early eruption, there was marked glandular enlargement; but in many of the later eruptions this involvement of the lymphatic glands was not so prominent. Also in the early cases mucous patches were almost invariably present.

There were four cases of hereditary syphilis noted. In three of these the eruption made its appearance at the beginning of the third month, in two in the maculopapular form, and in the third in the papular. These three patients were apparently



healthy when born, and continued so for a month. In fact, their condition, when first brought to the clinic, was not especially bad; and under appropriate treatment the cases progressed favorably. The fourth case was in an infant aged one month. The eruption was papulo-squamous, but sparse, and its squamous character only slightly marked. The child was puny and unhealthy when born, suffering with a severe coryza. When seen, the syphilitic cachexia was marked. The case remained under notice one week, and then failed to return. In this time it grew rapidly worse, and doubtless subsequently died.

In two of the four cases mucous patches were present, and in one—the patient that disappeared—there was a suppurative cervical adenitis.

Of the cases of *acne* coming under treatment, the majority were females, and the whole number much greater than the year before. The affection was seen most frequently in those between the ages of sixteen and twenty-five. One case was observed in a girl of twelve, and one in a woman past forty.

The patients were, as a rule, in good condition, but generally complained of weak digestive power; and in many there was an expressed aversion to fat and fatty foods.

*Pruritus cutanea* was recorded in twenty-five instances,—about the same percentage as in the preceding year. In two cases the affection was confined to parts about the genitals. The disease was in almost every instance in persons past the age of forty, and in a large number past sixty.

In one case the itching was so intense that the skin had been actually lacerated. In none of these cases was Bright's disease or diabetes present.

*Phtheiriasis* was credited with twenty-five cases, in the majority of which the body was the part infested.

*Urticaria* came under observation in the proportion of three and four-tenths per cent., against six per cent. the previous year. In several instances the disease had persisted for months, scarcely a day passing that the skin was entirely free. A few of the severe cases seemed traceable to malarial causes, and the supposition was subsequently corroborated by the effect of treatment. In most of the cases the affection unquestionably depended upon a dyspeptic condition, but in some no such cause was discoverable, and the eruption

seemed dependent on some obscure nervous disturbance. This was especially true of some of the chronic cases. At any rate, the disease in such cases was much more amenable to nervines than to any other class of remedies.

*Furunculus* occurred in the same number of cases as *urticaria*. In more than half the number there were present but a few furunculi, and after disappearing there was no relapse; while in others successive crops occurred, and only yielded after prolonged treatment.

If judged from the stand-point of dispensary practice, the disease is one of depressed vitality.

*Dermatitis, seborrhæa, erythema multiforme*, and *impetigo contagiosa* were observed in the same number of instances,—each nineteen. The cases of *erythema multiforme*, with but few exceptions, were recorded during spring and autumn. The papular form of the eruption predominated, and in a number of cases was confined to the hands and forearms, the dorsal surfaces preferably. The general health was undisturbed. In a few instances the eruption was more or less general, and markedly multiform in character, and accompanied with transient swelling and pain about the wrists and knee-joints. The average duration of the affection was about seventeen days. Four or five cases showed a succession of outbreaks.

*Impetigo contagiosa*, as remarked, was observed in nineteen instances,—two less than the twelvemonth previous.

This curious affection has an undoubtedly eczematous aspect, but is separated from it by its course and by the fact of its being produced by a contagious element; also, as a rule, by the absence of itching. The discrete vesicular beginning,—becoming at places confluent,—the rapid drying-up of the vesicular wall and contents, the thin wafer-like yellowish crust, with the peculiar “stuck-on” appearance, give the disease an undoubted individuality. The affection was in a few patients confined to the face, but generally there were in addition a few vesicles or patches on the hands; and in many cases the eruption appeared on the arms and legs. The disease generally disappeared after a few weeks, sometimes sooner; but in a small proportion of the cases the affection repeated itself, and occasionally a few flat pea-sized vesicles would apparently disappear, to be repro-

duced, and so on for several weeks. The contagious character, however, was always retained. The patients, with two exceptions, were all under the age of ten years,—many of them young children. The two exceptions were adults, the disease having been contracted from their children. In these the affection was limited to a few small abortive patches.

*Psoriasis* came under notice in but sixteen instances, a percentage of two and two-tenths,—one and one-half per cent. less than the year before. Two cases of the acute disease were noted. The youngest patient was eight years old, the oldest past fifty. In one instance the eruption was almost universal,—scarcely any part free. The skin in many places was one continuous sheet of eruption, and about the joints cracked and fissured. The patient was an intelligent German, and had suffered from the disease for years. His knowledge of the treatment of the disease was comprehensive, as he had been under treatment at many different times and at different places. The sole reason for which he sought medical aid was in order to obtain a prescription for an ointment of chrysophanic acid, the only remedy from which he had ever obtained relief. This would cause a disappearance of the eruption at the points of application, to return, however, after an interval of a few weeks.

In two cases the disease was confined to the scalp, the eruption at parts extending just beyond the border of the hair.

*Acne rosacea* numbered fifteen cases. Severe grades of the disease, in which hypertrophy is a marked feature, were not encountered. For the most part the affection was observed in what might be termed the intermediate or second stage,—that is, where acne papules and pustules are present and the capillaries slightly enlarged. In most of the cases the affection was confessedly due to intemperate habits, but in a few cases no such cause had acted, and it seemed dependent upon disorder of the digestive organs: at least, upon proper regulation of the intestinal functions and strengthening of the digestive power, the disease underwent rapid improvement.

Fourteen cases of *scabies* were treated. The disease was mostly seen in persons who had just crossed the ocean, and had evidently been contracted on shipboard. The few children in whom the disease was seen had just emerged from a "home," and by

one of these cases was conveyed to a younger member of the family, an infant six weeks old. The eruption in this case was principally about the face and hands. A few cuniculi were discovered on the hands.

*Purpura* was noted in eight cases; but, as in all the disease was of a simple character, no special interest is attached to them. In one instance only were rheumatic symptoms present, and in this the pains subsided shortly after the outbreak and gave no further cause of complaint. The parts affected were in five cases the legs alone, in the remaining three the arms and legs.

The number of cases of *herpes zoster* observed was eight, against sixteen of the preceding year. In two cases—in one of which the eruption was along the supra-orbital nerve—the pain was excessive, and required large doses of morphia for relief.

For the sake of convenience, the diseases coming under the class of *tinea* will be briefly considered together.

There were in all twenty cases produced by the vegetable parasites. Of these, thirteen came under the head of *tinea trichophytina*. In seven of these the disease was seated upon various parts of the body, exclusive of the scalp (*tinea circinata*), in three cases upon the scalp (*tinea tonsurans*), and in the remaining three upon the region of the beard (*tinea sycosis*). Four of these cases were furnished by one family, the child showing ringworm of the body and of the scalp, the mother ringworm of the body, and the father *tinea sycosis*.

Two of the cases of *tinea sycosis* were typical. The chin and parts immediately beneath were the seat of inflammatory lumpy nodules. The hair showed a thorough penetration of the fungus.

Seven cases of *tinea versicolor* are included in the group. In all the disease was confined to the upper part of the breast and back, and in several had persisted for years. The only uneasiness caused by its presence, as stated by the patients, was a feeling of itchiness of the parts when warm.

The remaining case of this group is one of *tinea favosa*. The subject was a youth twenty years of age; the site of the disease, the scalp. The affection had begun when the patient was five years old, and, although under medical care spasmodically, had never been thoroughly treated. The original features of the disease were necessa-

rily absent. The parts presented numerous atrophic areas, devoid of hair and slightly depressed, giving the scalp an appearance much resembling that occasionally seen as the result of syphilitic ulceration. The hair around about was dry, lustreless, and brittle, and that immediately surrounding the patches showed a meagre quantity of the fungus. The patient was somewhat discouraged by the prognosis concerning the restoration of the hair, and failed to reappear.

The remaining affections are either so unimportant or so few in number as to require no place in this brief analytical report except that given them in the table. Some of the remaining cases,—those of the rarer diseases,—it is true, were of considerable interest, but such will be otherwise communicated.

### TYPHOID FEVER AT THREE YEARS OF AGE.

BY CHARLES W. DULLES, M.D.,

Surgical Registrar to the Hospital of the University of Pennsylvania.

ON the night of February 24 I was called to see E. C., a little boy 3 years old, who had been taken ill a few days before, with cough, fever, and some constipation. On the day in which I saw him he had been carried to a dispensary, and received from one doctor a prescription of bromide of potash, and from another one of calomel, soda, and sugar, for his bowels, and a sedative cough-mixture containing paragoric. At the same time his parents were advised that he was too ill to be carried about, and should receive medical attendance at his home.

When I first saw him, he had a high fever, a troublesome cough, pupils widely dilated, and some delirium. He fretted and cried out, and picked persistently at his bedclothes.

On examination, I found evidences of bronchitis, and some apparent congestion of the upper part of both lungs. I found also a tongue with a heavy, gray, offensive coat. Concluding that it was high time his bowels were well moved, I ordered him to be given five grains of calomel, and that this should be repeated in four hours if no operation ensued.

The next day I found that his bowels were moved, and that the nervous manifestations were somewhat less marked. I ordered him to be given spt. æther. nitros., well diluted, to have only milk for food, and awaited developments. I this day examined his urine, and found it slightly albuminous and loaded with urates, but devoid of casts. The next day I found no appearance of improvement. The tongue was heavily coated and with red points scattered over it, and with red edges; the lips

were parched and scaling; the respirations were 44, and the pulse 130. I found some tenderness in the right iliac fossa. The nervous phenomena were as bad as ever. The child lay picking at the bedclothes, and had phantasy.

I now concluded that the case was one of typhoid fever, and ordered the following mixture:

R Acid. sulph. aromat., f3j;  
Acid. carbolic., gtt. iij;  
Glycerinæ, f3jss.

M. Sig.—A teaspoonful every four hours.

I also continued the use of a mixture of spirit of nitre,—a teaspoonful in a tumblerful of water,—giving a tablespoonful every half-hour. I also ordered the lips to be kept soft with vaseline, and his tongue to be painted frequently with glycerin,—measures which are so very refreshing to fever-patients that I am surprised occasionally to find medical men who do not regularly employ them.

The next morning (February 27) I found the child's nose bleeding, and that his bowels had been moved at midnight,—a dark, tenacious passage. His lips were still much parched, his tongue was coated as before, his pulse 160, his cough incessant and harassing. I now ordered tinct. opii deodorat., one drop every two hours till he was quiet, and the carbolic-acid and sulphuric-acid mixture as before. He took four drops of the opium during the day and two at night. The next day (the 28th of February) his pulse was 176, his respirations were 40 and grunting, his cough dry and short. His restlessness was not nearly so marked as before. I then ordered—

R Tinct. digitalis, gtt. xij;  
Syr. scillæ, f3j;  
Liq. ammon. acet., f3jss.

M. Sig.—F3j every hour.

In the evening he had had two stools of a yellow color, thicker than mush and sticking to the bottom of the chamber. He had passed no urine since noon of the day before.

March 1.—I found a pulse of 172; cough very troublesome. Three stools had been voided during the night and one this morning,—soft, ochre-colored stools. He had voided urine also three times.

The same medicine was continued, and a drop of deodorized tincture of opium given several times during the day. The next morning (March 2) I found him decidedly better. Pulse, 140; respiration, 40, and easy; cough very slight. During the night his bowels had been moved once,—a thin, yellow, slimy passage, which stained the sheet as would a salt of iron. The same treatment—of the digitalis, squill, and acetate of ammonia, with the opium p. r. n.—was continued.

The next day he had but one movement, and seemed better. His nose bled again this morning. I now ordered him, for its tonic effect,—

R Tinct. cardam. comp., fʒj;  
 Liq. ammon. acet., fʒjss;  
 Syrup. simp., fʒss.

M. Sig.—Fʒj t. d., in water.

During the following twenty-four hours he had five stools, and was given a drop of the opium after each. When I saw him in the morning (March 5), I was somewhat startled at his appearance. He was pallid, breathing superficial, lying asleep with his eyes half open and the pupils contracted. When I aroused him, however, I had the pleasure of seeing the pupils dilate fully, and finding he wanted to have my watch and pencil to play with, as had been his custom before. He was given no opium this day. Between dark and midnight his bowels were moved four times; and I ordered him to have twice a drop of opium.

In the next twenty-four hours his bowels were moved twice, the passages being a little darker and having more consistency. He passed no urine in the latter half of this period.

The next day (March 7) the little fellow was decidedly better. He sat up in bed; his bowels were quiet, his lips were soft, his tongue clearing up, his intelligence perfect, and his spirits rising.

Before March 8 his bowels were twice moved, with an appearance more natural; his cough was much less troublesome. The medicine prescribed March 4 was still being given. I found, this morning, a fine crop of sudamina on the abdomen.

March 9.—The boy was still better, sitting up in bed and playing with his toys. His bowels had been moved once since the day before. His medicine was continued t. d., and careful avoidance of strain enjoined, while his food was still restricted to milk.

March 10.—His bowels were moved but once in the foregoing twenty-four hours. The stool was small, brownish, and partly formed. His pulse was now 104, and his cough considerable.

After this his convalescence progressed steadily.

The chief points of interest in this case seem to me to be the following:

1. The early development of delirium.
2. The unusually troublesome character of the lung-complication.
3. The effect of the free use of opium.
4. The rapid convalescence, occurring within two weeks of the seizure.
5. The determination of the nature of the disease.

At first I had considerable doubt about calling it typhoid fever, because of the rarity of this disease in children; but when one puts together the symptoms—coated tongue, rapid pulse, high temperature, nose-bleed, bronchitis, delirium, tenderness over

the lower abdomen, numerous and characteristic stools, and finally the appearance of sudamina—I do not see how the diagnosis can be questioned. The exact thermometric range was not noted, for the reason that every attempt to do so excited the child very greatly, and I did not think it so important as to press the matter.

Some medical men have questioned the fact of the full development of Peyer's patches in little children; but only recently I have examined a specimen, taken from an infant that died of enterocolitis, in which they were as clearly defined as they are in an adult. If the case just described had terminated otherwise than as it did, I have no doubt it would have thrown some light on this subject.

114 SOUTH FORTIETH STREET.

## ANTISEPTIC USE OF BORAX.

BY FRANCIS H. ATKINS, M.D.

THE editorial comments on the use of borax as an antiseptic in the *Philadelphia Medical Times* of February 11 call to mind two uses I have made of this drug with purely antiseptic motives. For eight years past I have treated all the cases of erysipelas that have fallen to me with a solution of borax in glycerin, one drachm to the ounce, well rubbed into the skin, and applied on linen. In every case it has seemed to cut short the disease promptly, the characteristic appearances beginning to fade in a few hours. One old man, a frequent sufferer, took a copy of the formula, saying that nothing had ever before relieved him so quickly. Sometimes tincture of iron was given internally, sometimes not.

In the same time I have frequently treated suppurating sores—the results of cuts, bruises, burns, etc.—with an ointment of borax, the strength being immaterial as long as there was plenty of borax. In these cases it generally checked the supuration at once, and the redness rapidly faded away. Indeed, in this minor way it has seemed quite equal to carbolic acid.

FORT STANTON, NEW MEXICO.

\* DR. YACKE prefers atropia in menorrhagia and hæmoptysis to ergot. He uses hypodermically five drops three times per day of one part of atropia sulphate to one thousand parts of water.



## NOTES OF HOSPITAL PRACTICE.

## PENNSYLVANIA HOSPITAL.

SERVICE OF DR. R. J. LEVIS.

Reported by CHARLES H. WILLITS, M.D.

*INFLAMMATORY HYPERTROPHY OF BOTH LEGS, PROBABLY DUE TO INTERFERENCE WITH THE CIRCULATION AND LYMPHATIC AND NERVOUS SUPPLY, FROM PRESSURE, SECONDARY TO SYPHILITIC OSTITIS—TREPHINING OF THE INFERIOR MAXILLARY BONE—NERVE-SECTION FOR RELIEF OF NEURALGIA—AMPUTATION OF THE UPPER THIRD OF THE ARM, FOLLOWING RAILROAD INJURY.*

GENTLEMEN,—This patient whom I bring before you is suffering from an affection whose pathological nature is not well known.

On his admission into the hospital it was considered a case of elephantiasis of both legs, an affection not very often seen in this country.

That condition is best described as a chronic hypertrophic disease of the skin and subcutaneous connective tissue, giving rise to enlargement and deformity, accompanied by some glandular and lymphatic involvement.

The pathological anatomy of elephantiasis shows the greater part of the growth or enlargement to be made up of hypertrophied connective tissue. The corium and epidermis varies much in thickness, according as the surface is smooth or roughened, and the vessels and lymphatics running through it are increased in calibre.

In this case, however, the diagnosis of elephantiasis has been set aside, for a closer study of the case seems to show an involvement not of the skin and connective tissue alone, but of all the surrounding tissues.

There has been an osteitis of the ends of both femurs and the upper portions of the tibiae, due to congenital syphilis, the effect of which has been to produce a backward dislocation of the tibiae, directly resulting from a weakening of the ligaments of the joints, and a contraction or shortening of the hamstring tendons.

These dislocated ends of the tibiae, exerting great pressure on the popliteal space, have partly shut off the circulation and materially interfered with the action of the nerves and lymphatics.

I therefore think the enlargement of the legs due for the most part to stoppage of the venous return.

The limbs present now this peculiar con-

dition,—great hypertrophy of the tissues of the legs and feet, a reddened, scaly appearance of the skin, backward dislocation of the tibiae, a peculiar bulging and thickening of the condyles of the femurs, and very attenuated thighs.

The fact of the syphilitic origin of this remarkable case is confirmed by the history of congenital syphilis and the signs of osteitis in the wrist-joints also.

The boy has been in the hospital since last June, and from the first amputation had been considered inevitable.

His treatment thus far has been preparatory to that end. He gained some in strength during the autumn, but for the last week has evinced such symptoms of decline that it was deemed unwise to defer the operation longer.

After the application of the Esmarch bandage, I choose a point at the lower third of the thigh for my amputation. Then I make good anterior and posterior flaps, with plenty of integument in them, cut obliquely through the muscles, transversely through the vessels, and saw through the bones.

This procedure I repeat on the other leg. The further treatment is as in all such cases: wash the stumps well with carbolyzed water the strength of about one part of carbolic acid to forty parts of water, ligate all bleeding vessels with carbolyzed catgut ligatures, cutting off both ends, bring the flaps together with silver sutures, and, finally, dress the stumps with carbolyzed oil or cosmoline.

*Case II.*—The next case is an old woman upon whom I operated a year ago for the existing trouble. At that time she was an intense sufferer with neuralgia of the lower teeth, to relieve which I trephined the lower jaw and drew out and cut off about three-fourths of an inch of the inferior dental nerve. She experienced great relief after the operation, but now has a return of the same trouble. No doubt in this case there has been a reproduction of the nerve.

This will very often happen after nerve-section, even if the ends are widely separated and turned back into the surrounding muscular tissue.

To-day I propose repeating the operation, using the dental engine in the place of the trephine, and endeavoring to reach the nerve as near as possible to its entrance into the inferior dental canal.

To reach the nerve at that point I assume a position about an inch and a half below the condyle and half an inch inside the ramus of the inferior maxillary bone.

I now make a curved flap-like incision along the edge of the ramus, and raise up the flap, carrying with it most of the insertion of the masseter muscle.

A smooth surface of the bone now presents itself, to which I apply the cutting-burr of the dental engine, and with great care drill through the bone.

There is no difficulty experienced in finding the nerve, which I drag out and cut off as near as I can to its origin from the main trunk.

I now show you about half an inch of the nerve. The hemorrhage—probably from the inferior dental artery that accompanies the nerve—I control by packing the wound with a dry sponge, held in place by a tight bandage.

I will allow this first dressing to remain until all signs of hemorrhage have ceased, when the edges of the wound will be stitched together.

*Case III.*—This young woman, our next patient, is suffering with severe neuralgia of the arm. Six months ago she cut the inside of her thumb with a knife: the wound healed, but resulted in severe traumatic neuralgia.

On tracing the course of the pain, as indicated by her finger, it apparently follows the track of the musculo-spiral nerve, and upon pressing that nerve in any portion of its course it appears to give some pain.

I cannot say positively that injury has been done to that nerve, for peripheral nerves from inosculation may affect other large trunks, as the median, radial, or ulnar.

Under ether I place the Esmarch bandage on the arm, not only to control hemorrhage, but also to make the parts clear for the search for any nerve-nodules.

I here see the evidence of a cicatrix upon the middle of the palmar side of the thumb, over the second phalanx, upon which I cut down and expose, distinctly, a nerve-trunk. There are no nodules upon it, but it is greatly hypertrophied.

I raise up the nerve, seize it with the forceps, and stretch it thoroughly. I then cut off about an inch.

The wound is then closed with silver sutures. I have no doubt that this operation will entirely cure the existing trouble.

*Case IV.*—This last case is a small boy, the victim of a railroad-accident. He was struck by the cow-catcher of an engine and thrown from the track. His head and body were much cut and contused, and his right arm nearly completely severed in two at a point just above the elbow-joint.

On his entrance into the hospital yesterday, the mangled arm was cut away by the resident surgeon, and I propose to-day to amputate high enough up to allow of the formation of a good stump.

The usual steps in an amputation of the arm are well known to you all, so I will not enumerate them. But, as this operation is high up on the arm, it will serve as a good illustration of the means employed in applying an Esmarch bandage or tourniquet over a conical surface, as the shoulder-joint.

To prevent it from slipping off and relaxing the pressure, I take this simple precaution. I pass a broad roller bandage, about a yard or two long, around the boy's neck on the uninjured side, and bring the ends to the front and back of the affected shoulder and arm. The Esmarch bandage is now applied *over* the muslin one, the loose ends of which are carried around the boy's chest and secured under the shoulder of the uninjured side. By this means all slipping of the rubber tourniquet over the curved surface of the shoulder is effectually prevented.

#### HOSPITAL OF ORAL SURGERY.

IT is claimed and taught by Prof. Garretson that epithelial cancer is curable through wide removal of an affected part and replacement of the ablated tissue by a flap brought from the greatest possible distance. This teaching is substantiated by examples running back thirteen years.\*

On Saturday, February 18, an extreme illustration was brought before the clinical class of the Oral Hospital and a number of surgeons, where the disease involved both eyelids of the right side, extending well down upon the cheek, the contents of the orbit, including the internal and inferior bony floor, both nasal bones, the perpendicular lamella and cribriform plate of the os ethmoides, and, finally, the internal angular process of the frontal bone.

\* See Garretson's System of Oral Surgery; also Duhring's work on Dermatology, last edition.

That epithelioma so related could not but prove quickly fatal is not to be doubted. The patient, a rugged man, showing no signs of cachexia, understood this, and was very desirous that an attempt should be made to save him. With such appreciation on his part, the clinician suggested that, both for the patient's and for humanity's sake, he would do the plastic procedure, as it offered the only possible chance for life, while at the same time it was a case that would do much to distinguish the boundary of good lying in the performance.



Etherization being secured, a section begun over the frontal prominence was carried down the nose to the ala, and across the cheek to the angle of the jaw. Going back to the place of departure, an incision through the integument was made across the temporo-zygomatic region, ending, finally, beneath the ear. The soft parts involved in these lines were next dissected out. Examination now passed to the condition of the bony parts, with a result of finding conditions as described. An immediately succeeding step in the operation consisted in removal of the eye and its appendages. Following this, the surgical engine, with its armature of an oval burr, was brought into requisition. The orbital floor, side, and part of roof, together with cribriform and perpendicular plates of ethmoidal bone, were removed. The attention of surgeons cannot too frequently be called to the virtue lying in this engine. The movements of it are so delicate and trustworthy that, while the burr in

this case was revolving fifteen thousand times to the minute and the operator was exposing the olfactory lobes of the brain, his speech, and apparently his attention, were directed to persons with whom he was conversing. The diseased parts all gotten clear of, a great flap, having its pedicle about the region of the ear and its termination over the scapula, was turned and stitched into the place before occupied by the parts removed. Three days later a crucial incision was made into that portion of the flap overlying the orbit; and the four ears thus secured were worked around the circumference of the cavity, being retained in position by a conical sponge compress, supported in turn by the monocolus bandage.

The cut accompanying will explain to the eye of a surgeon the various steps of the operation.

### TRANSLATIONS.

**FORCED ALIMENTATION—DANGERS, AND MEANS OF OBTAINING THEM.**—Dr. Desnos, writing to the *Bulletin Général de Thérapeutique*, expresses the opinion that whilst forced alimentation is destined to be of great value in the treatment of phthisis, the introduction of the tube of Faucher and large amounts of the nutritive mixture through it may prove a source of danger, and thus present a serious obstacle to its use. Believing that in the interest of this new method its dangers should be early recognized, he has gathered a number of cases from his own practice and that of his colleagues illustrative of this fact. The first case that he mentions is that of a consumptive in whose lungs were cavities, and who complained of loss of appetite and inability to retain anything upon the stomach. Forced alimentation was tried after the œsophagus had been "educated" to the use of the tube for two days. One litre of milk was ordered; but hardly had a quarter of this quantity been introduced when a violent spasm of the stomach ensued: portions of the fluid were regurgitated through the mouth and nose, the face became livid, and asphyxia imminent. Upon the withdrawal of the tube, these symptoms somewhat abated, but within twenty-four hours a violent attack of pneumonia set in, which carried off the patient on the second day following. Particles of coagu-

lated milk had been noticed in the sputa of the patient after the tube was employed, and at the autopsy it was shown that some of the regurgitated milk had found its way into the smaller bronchi and had there set up the fatal inflammation.

Three other cases are cited in which the intolerance was so great as to render the use of the tube inadvisable. The applications of the tube in these three cases were made by a house-surgeon of the Charity Hospital, from which it has been objected that the unfavorable results might have been due to lack of skill on his part. In reply to this objection, Dr. Desnos avers that the operator was fully qualified, but that the method, to be of value, should be so simple and devoid of danger as to be capable of application by ordinary practitioners, under whose care the majority of such cases come. In conclusion, Dr. Desnos remarks that great care should be taken to prevent the entrance of any portion of the milk into the air-passages, and to avoid the contact of the tube upon its way downward with the exposed portions of the larynx. He has noticed that signs of suffocation do not present themselves until the fluid reaches the stomach, which he believes to be due to the shock produced by the sudden fall of a comparatively large quantity of the liquid upon the lower surface.

Setting aside the cases in which an absolute intolerance contra-indicates the employment of the tube, there are still those in which the tendency to spasm may be overcome by administering the food slowly and at intervals. It has been claimed that the fever is lowered and diarrhoea disappears under forced alimentation; but this is not always the case: the reverse has several times occurred. Dr. Desnos gives the moment of relative or absolute apyrexia as the most favorable time for making the injections, and considers that the best results are obtained when the food is given in small quantities, varied in composition to suit the condition of the digestion.

**BORACIC-ACID-POISONING.**—Dr. S. E. Molodenkow, of Moscow (*Wratsch.*, No. 31, 1881), reports two cases in which a solution of boracic acid (five per cent.) was used as a detergent antiseptic wash. One, a young man of 25 years, had an attack of pleurisy of three weeks' standing. The fluid effusion was withdrawn with an aspirator, and the pleural cavity washed

out with the boracic-acid solution, part of which was allowed to remain in the chest. Temporary amelioration followed, but the patient soon began to vomit. On the next day vomiting was constant, and the pulse became small and frequent; the patient was extremely feeble, and had hiccough. Towards evening an erythema appeared on the face, which, the next day, was accompanied by swelling, especially of the eyelids. On the following day the inflammation extended down the neck and became vesicular. The other symptoms became more marked; intelligence was unaffected to the last; death occurred on the fourth day. No autopsy.

The other case was 16 years of age, and suffered from a large lumbar abscess, which was opened, and washed with the above solution. The same symptoms were observed, and the patient died on the third day. The author summarizes the symptoms of poisoning by boracic acid as follows: "vomiting constant; hiccough; erythema, commencing on the face; a slight temporary elevation of the temperature; and a diminution in the contractility of the heart, proceeding to complete cardiac paralysis."

As a counter-poison, the author recommends the use of morphia and stimulants.—*La France Médicale*, January 18, 1882.

[Further observations are needed before we can be satisfied that boracic acid is solely responsible for the results in the above cases.—TRANS.]

**RESULTS OF NERVE-STRETCHING IN VARIOUS NERVE-DISORDERS.**—Out of one hundred and forty-seven published cases of nerve-stretching which B. Nocht collated, the permanent results were sometimes less favorable than they promised soon after the operation; and in one of Prof. Westphal's cases stretching of the crural nerve was followed by acute myelitis. After reviewing the several applications of this surgical expedient, he concludes that "in neuralgia, in tetanus and epilepsy, nerve-stretching has an incontestable value, but that in disorders of the motility and in affections of the central nervous system (at least it so appears from the reported cases) nerve-stretching can only be recognized as a symptomatic remedy, and not devoid of danger."

The following is a *résumé* of the cases cited (*Centralblatt für Chirurgie*, No. 6, p. 90):



In *sciatica* there were twenty-four cases, of which twenty-one were cured, in sixteen of which the result was immediate and permanent. One died of pyæmia; in another permanent lameness appeared.

In *trigeminal neuralgia*, seventeen cases. Ten were at once favorable; five were cured after a greater or less time; in two a relapse occurred. Out of four cases of resection or tearing of the nerve, three were cured.

In *traumatic neuralgia* a good result was obtained in two-thirds of the cases; in a few no result beyond temporary relief was experienced.

In *convulsive tic* seven out of eight cases had relief from the cramps; but facial paralysis followed in six. No return occurred in five cases kept for a long time under observation.

In *accessorius cramp* only in two out of seven cases was notable and lasting improvement obtained.

In *disturbances of motility* in the extremities a good result appeared in three out of six cases.

In *traumatic tetanus* six cases out of twenty-four were cured. Since in two of these energetic general treatment was also kept up, only in four (sixteen per cent.) could the success be attributed to the operation.

In *reflex epilepsy* good results were obtained; in three cases of congenital epilepsy improvement or cure resulted.

In *tabes dorsalis* amelioration of symptoms, especially of the pains, was obtained in a few cases, where sensibility, ataxia, and difficulties of the bladder and rectum improved; in others unfavorable results appeared, such as anæsthesia and paresis. The knee phenomenon was not re-developed.

In other diseases of the spinal cord unfavorable results preponderated.

**DEEP CARCINOMA OF THE NECK OF BRANCHIAL ORIGIN.**—R. Volkmann has met, during the last ten years, with three cases of primary carcinoma in the upper third of the neck, originating deep among the muscular structures, but without any connection with the skin, mucous membrane, or cervical glands. These heteroplastic growths he believes to be due to embryonal germs included in the joining of the branchial fissures and remaining deep in the cervical tissues until some unrecognized influence called them into active growth.

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To the cysts (Roser, Schede) and chondroma and chondrosarcoma (Max Schultze, Lücke) occurring in this region, and of recognized branchial origin, he adds this third or malignant form, which is obviously the rarest.—*Centralblatt für Chirurgie*, No. 4, p. 49.

**MENINGEAL INTRACRANIAL HEMORRHAGE.—TREPHINING—RECOVERY.**—Weljaminow reports (*Wratsch.*, 1881, No. 42), from C. Reyher's surgical clinic, a case of a man 31 years old, who fell from a step and struck his head. Symptoms of compression following, the slight scalp-wound was enlarged on the eighth day, a trephine applied, and a clot of blood removed from the surface of the dura mater. Seventeen days later the patient was well enough to leave his bed.

According to Bergmann's statistics, this makes the hundredth case of hemorrhage from the middle meningeal artery, the seventeenth of recovery, the fifth of intracranial hemorrhage, and the fourth in which trephining was successfully performed for the relief of compression of the brain.—*Centralblatt für Chirurgie*, No. 4, p. 62.

**RECOVERY AFTER GUNSHOT WOUND OF THE BRAIN.**—The *Deutsche Zeitschrift für Chirurgie* (Bd. xv. H. 5, 6) has the details of a case of pistol-shot of the head, where the ball entered the right parietal region and traversed the right hemisphere of the brain. Motor paresis of the legs existed for a time, but in three months the patient had completely recovered. Twenty months later he shot himself again, this time fatally. In the track of the former wound fatty degeneration of nerves and cells was found at the autopsy. The bullet was encysted near the falx.

**IODOFORM-POISONING.**—Max Schede, of Hamburg, in a communication to the *Centralblatt für Chirurgie* (No. 3, 1882), calls attention to the fact that iodoform applied to wounds and ulcers produces in some patients dangerous symptoms which forbid its use, although in most individuals no unfavorable result follows its free employment. He says, "There is an idiosyncrasy against iodoform, which makes it, for certain persons, a poison, and one all the more dangerous because no warning whatever is given which should indicate special caution. On the other hand, in a number of cases the toxic action seems to be cumulative and without premonition, the symptoms suddenly appearing and with great

gravity, the prompt removal of the remedy being often insufficient to avert the fatal result. The danger is greatest in children and in the treatment of recent wounds."

THE ETIOLOGY OF MORBID GROWTHS.—Cohnheim's theory of the origin of tumors, which considered them as atypical neoplasms from embryonal structures, and declared that every true tumor is traceable to deformed or persistent foetal cells, received strong confirmatory support from Zahn's well-known experiments, reported to the Congrès International de Genève. More recently, Leopold, in a paper upon "Experimental Investigations on the Etiology of Tumors" (*Virchow's Archiv für Path., Anat. und Phys., etc.*, Bd. lxxxv. pp. 283-284), reports a number of physiological experiments made with foetal cartilage, from which he makes the following statement as the result of numerous trials:

Pieces of cartilage taken from dogs after their birth and implanted in living tissues are reabsorbed or shrink, or, in some cases, remain stationary. Foetal cartilage, on the contrary, after implantation in a foreign organism, always lives and grows: indeed, it may increase to two or three hundred times its original size, and develop into a true tumor, an enchondroma.—*Centralblatt für Chirurgie*, No. 6, p. 85.

HYSTERICAL TREMOR OF LEG CURED BY STRETCHING THE SCIATIC NERVE.—In Paris, a girl of 18 years, who had suffered from convulsive hysteria from her third year, was admitted into the Hôpital Beaujon, suffering with contusion of the knee, caused by a fall on July 13, 1880. For four months she had hysterical aphonia, which was entirely and permanently relieved by chloroform inhalation; shortly afterwards, a constant tremor or rhythmic convulsion of the muscles of the limb, including flexion and extension. The leg became oedematous and congested while walking about, so that she had to be put in bed with the limb suspended. The swelling now subsided, but the trembling persisted. Anæsthesia existed upon the same side; the other, or left side, was hyperæsthetic. Pressure upon the sciatic nerve gave pain. M. Blum decided to stretch the sciatic nerve, which was performed, August 4, with great success; and the patient had entirely recovered by December 29.

Stretching of the sciatic quickly and finally suppressed the convulsion, without subjecting motility or sensibility to the

slightest diminution. On the contrary, the patient had more strength in the limb, and felt better, than before the operation.—*La France Médicale*, January 26.

THE DANGERS OF IODOFORM.—A REQUEST FROM PROF. KÖNIG.—Prof. König, of Göttingen, on account of the rapidly increasing use of iodoform by the profession, considers it so important to have reported all cases of death resulting from its employment, or cerebral disturbances following its continued exhibition, that he makes the request in the *Centralblatt für Chirurgie* that those under whose observation such cases may occur will kindly forward to his address brief reports of the same, with the privilege of publication in the *Centralblatt*.

CONGENITAL FISTULÆ IN THE SACRAL REGION.—At the session of the Société de Chirurgie of January 25, M. Terrillon reported three cases of fistulæ existing at or near the base of the sacrum. The direction of the fistulous tracks was oblique and towards the spinal column. The bone was not denuded; it discharged a liquid containing fatty matter and pavement epithelial cells. From time to time an abscess occurred in the neighborhood, which opened and left another sinus, until three or four fistulæ were formed. Two male cases treated by excision and the hot iron were cured; the third, a woman, refused treatment. The reporter had found them in several infants, and insisted upon their congenital character and upon the occasional attacks of inflammation followed by abscess.

TREATMENT OF HYDROPHOBIA.—In a discussion upon the use of Hoang-Nan in hydrophobia before the Société Médicale des Hôpitaux, a case of failure was reported in which the remedy had been used both by the mouth and hypodermically. Dujardin-Beaumetz spoke in favor of the Russian treatment by the hot-air bath, with the internal administration of garlic or of sulphide of allyl, and said that he had treated, six months ago, three persons in one family by this method, in whom no hydrophobic symptoms subsequently developed, although they were all bitten by a dog known to be mad, and their wounds were not cauterized. He had also made experiments with *valdivine*, and found that it does not cure hydrophobia, although it prevents its access.—*La France Médicale*, No. 13.

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## EDITORIAL.

PROF. JOSEPH PANCOAST.

JOSEPH PANCOAST, M.D., Emeritus Professor of General, Descriptive, and Surgical Anatomy in the Jefferson Medical College, died at his home in Philadelphia, March 7, 1882, in the seventy-seventh year of his age. During the past five or six years the health of the great surgeon had steadily but surely failed, and of late it has been painfully evident to his many friends that his illness could have but one termination. His death, therefore, though sincerely mourned, was not unexpected. At the end of a long and active career, in which he achieved eminence and received distinction such as the world awards to few, he passed away, surrounded by his family, ripe in years and honors, and happy in the consciousness of a well-spent and most useful life. Born in Burlington, New Jersey, in 1805, he was graduated at the University of Pennsylvania in 1828, and at once entered with ardor into the active duties of his profession as teacher, author, and practitioner. In 1831 he began systematically to lecture upon anatomy and surgery, and in 1834 was elected one of the physicians to the Philadelphia Hospital, and soon afterwards was also appointed physician-in-chief to the children's department of the same institution. In 1838 he was constituted a visiting surgeon, and served the institution until 1845, when his increasing duties compelled him reluctantly to relinquish a position with which he had been so long identified and which had afforded him so much interesting and valuable experience. He always referred to his connection with the Philadelphia Hospital as a period of great activity in making

numberless models and illustrations for his lectures, obtaining preparations and dissections, and in carrying into effect many novel and ingenious methods of treatment. In 1854 he was elected one of the attending surgeons to the Pennsylvania Hospital, from which he resigned in 1864. It was during this period that he performed the first successful hip-joint amputation that had ever occurred at this hospital. His connection with Jefferson Medical College began in 1838, when he was elected professor of surgery, a worthy successor to George McClellan, whose vacant chair he was appointed to fill. When the school was reconstructed in 1841, Prof. Pancoast took the chair of anatomy, dividing the clinic with the professor of surgery. In this and the former position, for thirty-six years, he faithfully and zealously labored, with his distinguished colleagues, to build up the reputation of the school with whose success he is identified. In 1874 declining health compelled him to resign his more active duties, to which his son, Prof. William H. Pancoast, succeeded, although for several years he kept up his interest in the clinic and occasionally lectured.

The literary labors of Prof. Pancoast, although fully attesting his great originality and ability as a writer and contributing not a little to his reputation as a surgeon, yet unfortunately are not as numerous as they would have been had he been less enthusiastic as a teacher and less busy as a practitioner. A translation from the Latin of Lobstein's "Treatise on the Structure, Functions, and Diseases of the Human Sympathetic Nerve," and of Manec's works on "The Sympathetic Nerve" and "Cerebro-Spinal Nervous System," his "Treatise on Operative Surgery" (first published in 1844), his edition of Wistar and Horner's Anatomy and of Quain's Plates, and a number of monographs and essays in the medical journals, demonstrate his ability as a surgeon and as an author, but do not equal his reputation as a skilful and successful

operator. Prompt in emergency, ingenious and ready in resource, ripe and sound in judgment, and brilliant in results, his possible contributions to medical literature are indicated in part in the occasional published reports of his clinical lectures, which inspire regret that he did not follow out the often-repeated suggestions of his colleagues and write a systematic work on surgery. It is to be hoped, however, that his literary executors may be able to supply from his case-books and scattered reports a memorial volume worthy of his reputation.

The fame of Prof. Pancoast was as great in Europe as in this country, and he was a member of a number of learned societies in different parts of the world. The memory of the banquet given in 1868 by the profession in this city to Profs. Pancoast and Gross on their return from a tour in Europe, which had been an extended ovation, is still fresh in the minds of the profession. Of the surgical achievements of Prof. Pancoast we need not speak. They belong to the history of American surgery. A fluent speaker, he possessed the gift of inspiring his hearers with some of his own zeal and enthusiasm, and his students, recognizing his genius, gave him their esteem and affection. Indeed, his clinical lectures had a peculiar charm, which only those who heard him in the fulness of his powers can now appreciate; they can also recall the fact that he was always greeted with applause, and his teachings were received with rapt attention. A man of great and diversified endowments, his moderate size gave little promise of the greatness of his mind. A diligent student, a perfect anatomist, a dexterous and skilful surgeon, he certainly was; but the paintings that he made also display his skill as an artist, while poetry of a decided literary merit attests his ability to shine in other paths had not his special predilection for surgery led him to undertake a life-work which has rendered so great a service to American surgery and to humanity.

#### THE PROGRESS OF THE SPECIALISTS' SCHEMES FOR PLUNDER.

THE specialists who have lusted after the flesh-pots of New York homœopaths are perhaps not going to have as easy a road to travel into opulence as they thought. The medical journals of New York City are giving their pages to indignant correspondents, and there are some indications that the *New York Medical Record* may have been premature in giving these ethical reformers its support. Worse than all, they are wounded and repulsed in the house of those whom they would fondle for lucre's sake: the homœopathic specialist evidently has at least one eye open. In his recent annual address the President of the Homœopathic State Society said "that though it had been assumed that the homœopathic school were deserting their principles for the sake of affiliating with their brethren of the dominant school, the allopathic school was dominant no longer, as was evidenced by the offer of its supporters to consult with their formerly despised brethren."

A revolt is also threatened on the part of some of the regular county societies; and, altogether, it would not be surprising if matters were lively at the next Annual Meeting of the New York State Medical Society.

Meanwhile, the homœopaths have entered the cheap-John race with the colleges patronized by some of the regular profession, to cast out as much of crude material upon the community as possible. The Homœopathic Medical College of Chicago is said to have graduated two hundred and sixty-six students on February 24. As these institutions, regular and irregular, live by selling the right to practise medicine, where one diploma covers everything, pathy or no pathy, the cheapest will thrive best in the market. Verily, some of our Eastern colleges must bestir themselves to get their standards still lower, if possible.



TO our recent remarks upon *chinolin* it has seemed worth while to add the following facts. The ordinary commercial chinolin is a reddish-brown liquid, while the tartrate is a white crystalline powder. It often has a disgusting tobacco-like odor, due to some uncombined chinolin or to slow decomposition. Rueber\* found that by repeated distillations of chinolin made synthetically according to Skraup's method (48 parts of nitro-benzole, 76 parts of aniline, 240 parts of glycerin, and 200 of English sulphuric acid), he obtained a *colorless*, transparent, oily liquid which remained unchanged after six months, from which a specimen of fine acicular crystals of chinolin tartrate was obtained, which possessed only a faint odor. The salt was insoluble in ether, soluble in sixty-five parts of alcohol and in twenty parts of water at 15° C.; but water at 100° dissolves six times as great a proportion: the excess afterwards deposits on cooling. It is given in doses of one or two grams to adults, in wafers. It may be given to children in equal parts of syrup and distilled water. Peppermint is suggested as best adapted for disguising the taste. It does not cause any unpleasant after-effects, and has not, thus far, produced tinnitus or other cerebral disorder.

### PROCEEDINGS OF SOCIETIES.

#### PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society was held at the Hall of the College of Physicians, Philadelphia, November 23, 1881, Dr. Albert H. Smith, President of the Society, in the chair. A discussion of Syphilis, by appointment of the Society, was opened by "Remarks upon the Clinical History of Chancre and Chancroid" (see p. 405), by Dr. John Ashhurst, Jr., followed by a paper from Dr. John B. Roberts upon the "Relationship of Scrofula to Congenital Syphilis" (see p. 409).

#### DISCUSSION ON CHANCRE AND CHANCROID.

Dr. J. Wm. White said that very little, if anything, could be added to the admirable

summary of the clinical history of chancre and chancroid by the lecturer, but he felt obliged to differ from him as to the probable cause of the latter affection. There are many good reasons for belief in the non-specificity of chancroid. A few of these may be mentioned. Chancroid has no period of incubation, which is an almost constant feature of specific diseases. It does not protect from a second attack; it is not self-limited. Repeated inoculations show progressive enfeeblement of its power of transmission, which is finally lost. This diminution of the power of inoculation is not noticed at all, or but very slightly, in the true specific diseases. It may be produced with all its so-called "specific" characteristics by inoculation with the secretion from an irritated infecting chancre. It is hardly to be supposed that the irritation of the chancre generates *de novo* this chancroidal poison, but, if not, how are these sores, known as Clerc's chancroids, to be accounted for other than by the theory of pus-contagion? And if these may be produced in that manner, why not all chancroids? Again, it has been shown by the experiments of Dr. Wigglesworth, and those made by Vidal many years previous, that chancroidal sores were obtained by inoculation with pus from acne. These sores pursued the same course as ordinary chancroid, and were, in fact, indistinguishable from it. Then, again, sores which were to all appearance chancroids have in many cases been followed by evidences of syphilis; and this assertion rests upon the evidence of some of the most accurate clinical observers. A belief in the imaginary "mixed" sore, or one in which two distinct kinds of virus have been implanted, would require the acceptance of a phenomenon without parallel in pathology, of two poisons running their course side by side at the same time and in the same locality. Vaccino-syphilis is not, as has been asserted, strictly analogous, for the vaccine disease pursues its course and terminates it before the appearance of syphilis. In these cases, then, of chancroidal sores followed by syphilis, it seems more reasonable to suppose that such sores are local developments, the result of pus-contagion, and which have the poison of syphilis inoculated simultaneously with the irritating purulent secretion which produced the local disturbance. He would also have to differ from the lecturer in his statement that there is no tendency to spontaneous cure, and that "specific" treatment is necessary. For a number of years the speaker had only cauterized venereal sores under very exceptional circumstances, having found in the case of chancroids that this procedure was not necessary for cure. Since adopting simple treatment in chancroid he has had better results. His attention was called to this by a paper in the *Boston Medical and Surgical Journal*, written by Dr. Greenough; and since adopting it he has un-

\* Monthly Review of Medicine and Pharmacy, translated from Schweizerische Wochenschrift, No. 49.

questionably had a smaller proportion of complications, such as phimosis and bubo, and has shortened the time of the cure.

For these reasons, he thought that the specificity of chancroid could not be taken as proved, but that the probabilities are on the other side,—i.e., that it is a local manifestation of pus-contagion, which is sometimes followed by syphilis, because the syphilitic virus may also be deposited at the same time, the ulcerative process in some persons overshadowing or altogether preventing the new cell-growth which gives to the true chancre its clinical peculiarities.

Dr. Frank Woodbury said that he would report two cases from private practice, of multiple hard chancre, one having three and the other two primary lesions. S. R. B., white, about 32 years of age, a married man, while on a visit to Washington had impure connection on November 27, 1880. Having some knowledge of venereal disease, though never having suffered from chancre, he examined himself daily for any suspicious appearances, but nothing was seen until December 23, when he noticed a slight papular induration immediately behind the corona glandis upon the dorsum of the penis, and on the next day another papule appeared at the side of the first. On the day after Christmas he applied for treatment, when three indurated chancres—two elliptical and of moderate size, the other round—were seen in a row parallel with the border of the glans and behind it on the shaft of the penis. They were touched with carbolic acid to satisfy the patient, and mercurial treatment used (black wash locally, and protiodide internally). On the 30th diarrhoea was produced by the medicine, which was changed to the biniodide on the following day, and on January 5 a pill of calomel and opium was substituted. In spite of the specific treatment, the secondary symptoms duly made their appearance, on the 17th, by a papular, coppery eruption on the back, which, during the next few days, spread over the shoulders, chest, arms, and face. The chancres showed some superficial erosion, perhaps due to the acid, but there was no decided suppuration; they gradually diminished, apparently more from the effects of the black wash than from the general treatment, for the indurated inguinal glands in both groins, noticed at the first visit, remained the same until the patient was lost sight of in February, with the eruption still out upon him, the corona veneris upon his forehead and a papular syphilide on his hands.

The second patient was an African, 28 years of age, a waiter. He had suspicious intercourse December 12, 1880, and four days later had a gonorrhœal discharge, for which he was treated unsuccessfully. A week later he first came to Dr. W.'s office with a characteristic free purulent urethral discharge and a left-sided adenitis. Omitting details of treatment, it was

noted that, on January 17, the discharge had entirely ceased, he passed water without pain, and the inguinal gland had not suppurated; but now two suspicious papular elevations appeared on the dorsum of the penis in the same position as in the preceding case. A week later the chancres were split-pea-sized, not tender nor ulcerated, and there was observed an enlarged marble-like gland in the left inguinal region that apparently had remained from the former adenitis. The disease yielded to the treatment adopted in the former case, but no record was made of any subsequent manifestations: if any occurred, they were slight. The patient was in good health a year afterwards.

The above cases are reported on account of the rarity of multiple infecting chancres, and the definite history of inoculation and the period of incubation. From observation of venereal sores made while at the Pennsylvania Hospital and since, the speaker could confirm the distinction laid down as existing between the clinical history of the initial lesion of syphilis, and other venereal ulcers; but he was not prepared to entertain the theory of a specific character for the soft, local sore unless the lecturer would be willing to admit a third form of lesion, which while venereal in its origin would be neither syphilitic nor due to any other specific poison. He had no doubt that many causes might produce a simple superficial ulceration, which would rapidly heal without any other than hygienic treatment.

In regard to the possibility of a combined poison being communicated, he thought that the second case showed that gonorrhœa and syphilis are not incompatible under certain circumstances, although far from being identical, as claimed by John Hunter and more recently by Hammond. In obscure cases it may be found that the slight induration escapes observation, or that a previous soft sore may subsequently develop into a chancre with more or less induration. A woman having an assortment of diseases may thus give gonorrhœa to one, chancre to another, simple ulceration to a third, while a fourth may have a combined attack, or may escape altogether. In a careful consideration of the clinical history of syphilis, the fact should not be overlooked of the varying susceptibility of the individual, which we all acknowledge to exist in the ordinary zymotic diseases: while one may be exposed without contracting any disorder whatever, or escape with a trifling local manifestation, another from the same source of contagion may acquire syphilis in its most malignant form. Syphilis in exceptional instances may be a local disease; as the rule, it is a specific constitutional affection; chancroid, as the rule, is purely a local lesion, rarely it is associated with phagedæna and more or less profound depression of the system, and in this form is contagious. Ulcera-

tions of the genitals are not necessarily either venereal or specific.

Dr. M. S. French believed that the number of infecting chancres seen to-day is not so great as formerly, and especially are they less frequent in the higher classes. In confirmation of the views expressed by the lecturer with regard to phagedæna being caused by irritation, he stated that simply by keeping the surface clean and covered by lint, the ulceration would not spread, and no phagedæna would occur.

Dr. W. R. D. Blackwood inquired more particularly with regard to the communication of syphilis by the milk in nursing and by the secretions. It had been his opinion that there was little danger from nursing unless there should be some abrasion upon the nipple. Nor did he believe that syphilis was communicable by the saliva unless it should contain some broken-down cells from a mucous patch in the mouth.

In reply to some remarks of the lecturer, Dr. White called his attention to the fact that he had not explained the circumstance that many eminent surgeons and accurate clinical observers had seen syphilis follow sores having all the characters of chancroids, and which were under observation from the beginning to the end of the disease. To deny the possibility of this is to impugn the testimony of men who rank second to none in the profession. To explain it on the theory of specificity of the chancroid involves, as has been said, a belief in the undemonstrable "mixed" sore, the existence of which there are very good reasons, from a pathological stand-point, for doubting.

With regard to the inoculation of pus, accidental or otherwise, and to the immunity from chancroids observed in hospital surgeons, nurses, and others whose fingers are often bathed in purulent secretions, the differences are clearly due to anatomical conditions. Extra-genital chancroids are, it is true, of the rarest occurrence. In the lower classes, however, those seen in hospital and dispensary practice, exposure of other parts than the genital apparatus to contact with chancroidal pus cannot be very infrequent, but it seldom affects them, by reason of their resistant epidermis and comparatively firm structure.

The erectile tissue of the glans penis, and the abundant loose cellular tissue of the external genitals of the female, offer favorable conditions for the development of ulceration as a sequence of local irritation. The vagina must undoubtedly with great frequency be exposed to contact with this pus arising from chancroids, and yet it is almost as uncommon to find such sores on the vagina as to find them on the fingers. They are also very rarely seen on the parts in the neighborhood of the penis in the male, and nineteen-twentieths of them are seated upon the glans, which, as a matter of fact, is not much more

exposed to contact with pus arising from chancroid in women than are other portions of the penis. Whatever the explanation, it is an indisputable clinical fact that exposure to irritating pus, no matter whence it is derived, *may* be followed by sores indistinguishable from chancroids.

Within a few days he had seen a case of gonorrhœa in which, as a consequence of neglect, balanitis and inflammatory phimosis had ensued, and it had finally become necessary to lay open the prepuce. In so doing, the glans was found extensively ulcerated, the ulcers excavated, having abrupt edges, filled with pus, or, in other words, having all the appearances of chancroids, although in this case the pus was gonorrhœal and only acquired its extremely irritating properties by reason of its retention and decomposition beneath the foreskin.

Such cases are so common in hospital practice that this was only mentioned as bearing upon the general subject under discussion.

Dr. Samuel Ashhurst said that the point of special interest to him was that bearing upon the remarks of Dr. White with regard to the specific character of chancroid. He had always regarded this as a specific lesion, but the open bubo was a difficult matter for him to solve; the extreme tediousness of some of these cases had been already alluded to, and he had more than once been baffled in his hospital experience, and had even resorted to the application of the actual cautery in order to get a new surface for healing. He had recently met with a case that shocked his conclusions in regard to the necessity for specific treatment. A case of serpiginous ulceration that was obstinate to local treatment had passed out of his hands, and he subsequently found that he had rapidly recovered after using some decoction of herbs made by an old black woman.

In taking his seat, he asked the lecturer to give his views regarding the specific character of the open bubo that so often accompanies chancroid.

Dr. John B. Roberts requested information in regard to those cases where the chancre is only papular and does not ulcerate: is the disease communicable by them? Also in reference to the desirability of cauterizing syphilitic sores.

Dr. John Ashhurst, Jr., said that he would reply to the queries in inverse order. With regard to the papular chancre, he doubted if the initial lesion of syphilis ever passed through its course without ulceration, although the ulcerated spot might be only the size of a pin's head. In the vast majority of cases the disease was communicated by secondary lesions. With regard to cauterization of venereal sores, the best authorities did not recommend the cauterizing of true chancres, and he certainly did not himself.

The object of cauterizing the chancre is not only to aid its healing, but also to prevent its spreading by auto-inoculation; although the secretion remains virulent to the last, the chancre, if cauterized, is less likely to spread, and where auto-inoculation occurs it is due to insufficient cauterization.

With regard to the serpiginous forms of venereal ulcer, he had already stated that some of these were not chancroidal, but syphilitic: in such cases there may be not the ordinary syphilitic bubo, but serpiginous ulceration, just as in old ulcers of the legs in syphilitic subjects. Cauterization may be desirable in such cases, but they also require constitutional treatment. Then there are some ulcers which may closely resemble the serpiginous venereal sores, and which yet are not venereal at all, such as some forms of lupus and the "esthiomène" of French writers. In nursing, he did not believe that the blood or discharge mingled with the nurse's milk could communicate syphilis unless by inoculation upon the child's mouth or lips: the poison would not be absorbed in the process of digestion.

With regard to the relative prevalence of chancre and chancroid, undoubtedly chancroid was, some years since, much more common than true chancre; but a change was coming about now in this respect, and the syphilitic lesion was rather more frequent at present than it had been formerly, though still, he thought, less so than chancroid. The difference according to social condition undoubtedly exists: the "better classes" of unchaste women are more likely to communicate chancre than chancroid. Chancroid is painful and will prevent intercourse; the mucous patch is not painful. There is another source of contagion that has not been mentioned: some cases believed to be gonorrhœal are really syphilitic. There is a discharge from the male urethra which has the power of communicating syphilis; this is not a primary lesion, but may be a secondary or tertiary affection: there are clinical differences as to the character of the discharge which distinguish it from gonorrhœa, and it will not get well without constitutional treatment. Similarly there may be in the female a syphilitic discharge from the cervix uteri which the woman does not consider anything more than leucorrhœa.

In reply to the question of Dr. Woodbury, he would say that he had no doubt of the existence of varying individual susceptibility, and referred to the well-known case of three students who acquired from the same source chancre, chancroid, and gonorrhœa respectively. This might be explained by a kind of acclimatization: if a man had had gonorrhœa several times, he might have only a slight attack of urethritis. Again, a syphilitic person would not acquire chancre, though he might have chancroid or gonorrhœa. More-

over, there is a certain immunity conferred by hereditary influence, as illustrated by the histories of certain noble families of Europe. Persons having a thicker skin than others are less likely to absorb the poison, and are therefore less susceptible to syphilis.

With regard to Dr. White's argument, the first point is that chancroid has not a period of incubation and does not protect from a second attack. These peculiarities are only seen in constitutional diseases such as scarlet fever, and he had always believed and taught that chancroid was strictly a local disease. Then, again, the courses pursued by the sore caused by ordinary pus-inoculation and chancroid are different. The chancroid produces bubo, but the pus-sore does not. Cases have been indeed reported, but there is room for doubt as to their authenticity. In Dr. Wigglesworth's experiments no bubo occurred, but the sores rapidly healed. This is not the course of chancroid. There is a case reported by Dr. Taylor (and I have great respect for his opinion; he is one of the best syphilographers of the day), in which a married man, who was syphilitic, also acquired gonorrhœa; six days afterwards he had a crop of herpetic vesicles, and still six days later several chancroids, which were believed to have originated from the gonorrhœal pus flowing over the herpetic ulcer. While drunk, he had intercourse with his wife, and communicated chancroid to her, and she afterwards acquired syphilis on her own account. I confess to having some doubt as to the reliability of testimony given by such patients. In Dr. Wigglesworth's case there was no subsequent trouble whatever after inoculation with acne pus, but the sores soon healed: there was no bubo.

With reference to the mixed sore, Dr. A. did not see any special difficulty in the way of mixing the syphilitic virus with the chancroidal; the individual may acquire syphilis at the same time with chancroid, or previously, or he may acquire syphilis from a mucous patch in the mouth of the same woman from whom he obtains a chancroid on the penis, and in the course of time an indurated sore (what Fournier calls the *pseudo-chancroid induré*) may appear on the penis at the site of the chancroid, and may readily be mistaken for the initial lesion.

In regard to the spontaneous healing of chancroid, he had said that such sores might do well under simple treatment, such as the use of iodoform powder or ointment; but he cauterizes them to prevent auto-inoculation. The vast majority of patients cannot be trusted to be sufficiently careful; the best thing is for the surgeon to cauterize a chancroid, by which plan the danger of auto-inoculation is much diminished; the sores will then heal under simple treatment.

There is, however, not the same tendency to get well in a chancroid as in an ordinary pus-sore. While I have great respect for the



opinion of gentlemen who entertain the views advanced by Dr. White, it really seems to me that they shut their eyes to things that are right before them. Surgeons inoculate themselves with pus a hundred times in the course of a year, by pins in bandages, etc.; but they do not have chancroids resulting.

In reply to a question regarding the treatment of chancroid at the meatus, with retention of urine, I would recommend that the surface be covered for the time being with a strong solution of nitrate of silver, and then a catheter might be passed.

Dr. Ashhurst, in conclusion, said that there were many instances in the history of medicine in which diseases generally believed to be different were regarded by other observers as identical. For instance, Hebra taught that chicken-pox and smallpox were the same disease; and it was held for many years that measles and smallpox were the same. Dr. Bumstead put the thing in a very proper light when he spoke of the impossibility of distinguishing between plants by merely examining their seeds. When the seeds were planted, and the leaves and flowers appeared, the distinction was easily made. In the same way, cases might often occur in which the surgeon could not say at once whether a given sore was chancre or chancroid, or, on the other hand, whether it was chancroid or an ulcer accompanying balanoprophitis; but let the course of the disease be watched, and its nature would soon become apparent.

It is true that in the vast majority of cases chancroids are upon the genital organs and surgeons' wounds upon the hands; but the explanation I would give is that surgeons inoculate themselves with simple and not chancroidal pus; and the reason why patients get chancroid upon the penis is because they put the organ where the chancroid is. If the surgeon should put his finger where chancroid was, he would also get chancroid upon his finger if the skin were thin or broken. This has actually occurred in some cases, and the resulting sores have been very different from those resulting from the accidental inoculation of simple pus.

#### PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, DECEMBER 22, 1881.

The PRESIDENT, DR. S. W. GROSS, in the chair.

*Heart with atheromatous coronary arteries, from a case of angina pectoris.* Exhibited by S. F. HAZLEHURST, M.D.

MARION B., æt. 34, had suffered for several months from pain at the pit of the stomach, now and then occurring in paroxysms, attended with dyspnoea, the attacks gradually becoming more frequent and of increased severity, causing great distress.

The only noticeable symptom was an aortic murmur.

December 12.—She returned to the dispensary, reporting herself as somewhat improved, which she attributed to a mass of small lumbricoid worms vomited that morning.

December 14.—She died.

*Post-mortem*, six hours after death.—Stomach first examined: somewhat congested in appearance. Heart rather more easily torn than usual; one of the aortic valves considerably ossified and bound back against the aortic wall. Coronary arteries almost obliterated. Aorta atheromatous.

*Tumor of spleen.* Exhibited by Dr. JAMES TYSON.

The specimen was apparently a *gummy* tumor, involving a central segment of the spleen all the way across the shorter diameter, being two inches in its longer diameter, which coincided with the shorter one of the spleen, and one and one-half inch in its vertical or shorter diameter. It occupied the exact central segment of the spleen, which it divided into two nearly equal parts, the connective tissue of the growth being continuous with the trabecular tissue of the spleen. The spleen itself, including this intermediate new growth, was rather smaller than usual, measuring three and one-half by two inches.

The condition was unexpectedly found at an autopsy made before the class at the University.

THURSDAY EVENING, JANUARY 12, 1882.

VICE-PRESIDENT JAMES TYSON, M.D., in the chair.

*Two cases of unusual cardiac disease.* By Dr. J. H. MUSSER.

CASE I.—I saw the patient from whom this specimen was removed, the day previous to his death. He was so very ill that only a cursory examination of him could be made. There was general anasarca, *right* hydrothorax being especially noted. He was more or less cyanosed; suffered from extreme constant orthopnoea; the kidneys secreted but a small amount. The impulse of the heart was diffused; the apex-beat in the sixth interspace outside of nipple-line; loud systolic murmurs were noted in the mitral and tricuspid areas. The heart's action was irregular and rapid; the pulse rapid, small, and feeble. He was 58 years of age, had been an active business-man, a high liver, and a constant and immoderate drinker. The duration of the illness from the first cardiac manifestations was five years. Palpitation and dyspnoea were first noted. (Edema of the feet began two years ago. He never suffered from cardiac pain.

*Post-mortem examination*, forty-eight hours after death.—Rigor mortis marked; extremities and face blue; oedema of entire body; the right pleural cavity three-fourths filled

with serum; the portion of lung not collapsed congested; left lung œdematous and congested. The heart was enlarged, weighing twenty ounces. The coronary arteries of both sides were tortuous and rigid from atheroma; the veins distended. The walls of the right side were about one-eighth inch in thickness, pale and flabby, and were very fatty along the septa and in small areas over the surface. The right cavity was enormously dilated; the tricuspid valves were healthy, but incompetent, admitting the fingers and thumb. The walls of the left ventricle averaged three-quarters of an inch in thickness: they were contracted and of a natural color. The mitral valves were healthy, but incompetent, admitting three fingers. Both auricles were dilated. The aorta was dilated and atheromatous throughout its course. The liver was enlarged and congested. The kidneys were characteristic of cyanotic induration, and the right contained a cyst as large as a walnut.

*Case II.*—Mr. D., æt. 83. With the exception of being an inveterate smoker, habits very good. Although always industrious, he has never been a hard worker. Forty-one years ago he had typhus fever followed by a chronic leg-ulcer. The past fifteen years he suffered from cardiac symptoms. At first palpitation, frequent sighing, and paroxysmal cardiac pains were noted. The pains increased in frequency and severity, but he never had true angina pectoris. The attacks of palpitation gradually became severe when quiet, as well as on exertion. For three years past he had suffered from attacks of dyspnea at night, the desire for air arousing him from sleep; while in the mornings, on account of a sense of weakness about the heart and of inability to get his breath fully, he would not be able to leave his room for a full hour. Even then he could not regain himself without taking some warm drink. He noticed that as his leg-ulcer tended to heal, or when healed entirely, his cardiac symptoms were more severe; while the more abundantly the ulcer discharged, the better did he feel.

My attention was first called to the heart when treating him two years ago for erysipelas. The pulse was 60, though the temperature was 102°. I noted then a feeble pulse, a fair impulse, a weakened first and a weak second sound. He again came under my observation three weeks ago, suffering from pneumonia of the left apex. Along with the apex-consolidation, the remainder of each lung was congested. The pulse was slow, moderately full and feeble, the impulse somewhat lessened in force. When the congestion of the lungs became marked, and the respiration much increased, the pulse-rate became higher, at one time reaching 126. During the attack he had Stokes-Cheyne respiration at irregular intervals, and the previously-noted cardiac symptoms were marked. He died of heart-clot.

At the post-mortem examination the lungs were in the condition above detailed. The heart was rather under-sized for a large man, and it presented to the naked eye all the appearances of fatty degeneration. It was pale and flabby, and there was a large increase of fat, especially along the vessels. Its texture was soft, and it contained heart-clots. The other organs were healthy.

The first case is of interest on account of the disease of the coronary arteries without cardiac pain, and on account of the dilatation and degeneration being more marked on the right side than on the left, without any chronic pulmonary disease. The mouth of the right coronary artery is smaller than that of the left, but not more marked than in health. Although in the second case there were all the symptoms of a fatty heart, save that the impulse was readily detected and the pulse was not markedly feeble, and although the macroscopic appearances correspond to such a heart, yet I am not prepared to say that it is a fatty heart. A microscopical examination will be made and reported. The pains, of course, were only those of a false angina; and I am inclined to lay some stress on excessive smoking as an etiological factor in causing a neurosis, not only cardiac, but involving respiratory nerves,—a pneumogastric affection.

Dr. MUSSEY said that these cases were of great interest, chiefly on account of their clinical histories being contradicted, as it were, by the autopsies. No microscopic examination had been made as yet to determine whether the "fatty" heart was really the subject of fatty degeneration or only of fatty infiltration. In this case with diseased coronary arteries no angina pectoris was noted, while in the other specimen with healthy vessels anginal pain had been a prominent symptom. A microscopic examination of the heart-substance would perhaps explain this apparent discrepancy.

Dr. F. P. HENRY thought it an interesting point that so much hypertrophy was coincident with such marked contraction of the nutrient arteries. He therefore would consider that the vascular stenosis was subsequent to the hypertrophy. For the production of cardiac hypertrophy at least two factors are essential, namely, a fair state of general nutrition and a patulous condition of the coronary orifices. Some time ago, Dr. Henry had shown two specimens to the Society illustrating these views. In one, the coronary arteries were enormously dilated, with great cardiac hypertrophy; while in the other, marked stenosis of those vessels was accompanied with a heart of normal size, the patient dying with extreme anginous symptoms. He would ask Dr. Mussey whether in the patient with hypertrophied heart the pulse was slow or frequent.

Dr. MUSSEY replied that the heart's action was rapid and intermittent.

Dr. HENRY said that Prof. Alonzo Clark, of New York, had pointed out that in embolism of the coronary arteries a *suddenly slow* pulse was almost pathognomonic. Such an observation would naturally raise the question whether, in cases of a more gradual occlusion of these vessels, any aid to the diagnosis of the pathological condition could be obtained from a study of the pulse-rate.

*Abscess-sac attached to fang of tooth.* Exhibited by Dr. J. B. ROBERTS.

There was no special history with this specimen, other than that of impending alveolar abscess, which had caused the sacrifice of the tooth. It well exhibited the early condition and starting-point of ordinary alveolar abscess.

*A case of spontaneous atrophy of a tumor.*

Dr. J. B. ROBERTS then made some remarks on an interesting case of atrophy of a skin tumor, which was probably of a fibrous nature and connected with a nerve. He had not observed this diminution in bulk himself, and had to rely upon the patient's statements, which, however, he had no reason to doubt were perfectly correct. The patient received, seven or eight years previously, a wound in the axilla which exposed the brachial plexus. Since then he has suffered from general pains, hyperæsthesia of the hands and feet, slight unsteadiness of gait, and difficulty after sitting in assuming the erect posture. The tumor had appeared on the shoulder a short time after the accident, and was very painful on pressure. A few weeks before Dr. Roberts saw him, the tumor suddenly commenced to grow smaller, until now it is reduced to probably a sixth of its original bulk.

Dr. FORMAD recalled the account of a case, recently read by him, where a uterine fibroid had rapidly disappeared after the removal of the ovaries, although the removal of the fibroid, when attempted, was abandoned, owing to adhesions, etc.

Dr. MUSSER pointed out that Dr. Formad's case was not very unusual, since oöphorectomy was nowadays recommended as a cure for uterine fibroids. He had, recently, a case of multiple sarcomatous tumors of the skin, following removal of the breast for a similar disease, in which one growth that had attained the size of a walnut finally entirely disappeared.

Dr. TYSON remarked that some of the members doubtless remembered a case, reported by Dr. Duhring as one of inflammatory neoplasm of the skin, which was finally determined to be of a sarcomatous nature, where rapid appearance and disappearance of the growths was repeatedly observed.

Dr. SMITH (*British Medical Journal*) reports several cases of lead-poisoning in weavers from handling yarn colored yellow with the chromate of lead.

## OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, MARCH 2, 1882.

RICHARD A. CLEEMANN, M.D., in the chair.

### MECHANICAL DILATORS IN GYNÆCOLOGICAL PRACTICE.

Dr. CHAS. H. THOMAS had used the Ellinger dilator, and had been very much annoyed by a bad fault in the form of the blades. As soon as the instrument is opened, the uterus shows a strong tendency to slip away from the dilator. This is due to the form of the outside edges of the blades, which gives to the dilator a wedge shape, with a difference of ten millimetres between the measurements of the base and apex. Conicity in uterine dilators is a dangerous quality, the instrument tending to slip in the direction of the base of the wedge. If the dilator, when in use, slip out of the grasp of the cervix, it is likely to produce laceration; while if it slip inward, as most dilators tend to do, it will wound the fundus uteri.

Dr. B. F. BAER made the following remarks: "I am glad that Dr. Thomas has alluded to some of the defects of Ellinger's dilator. I have found the same objections, and have tried to overcome them by having an instrument so made that the mechanism by which the blades are separated is placed in the blades themselves, close to their points, and entirely concealed when they are in contact. This gives great power to a *small* instrument; and as the outer surfaces of the blades are perfectly parallel and cannot feather, because of the position of the separating mechanism, the instrument does not slip out. I do not now need a tenaculum to hold the cervix in place, which is a great advantage. I have also had the handles bent down, so that I can see just what the instrument is doing; and by a screw, so placed that it can be worked on the left with the left hand, whilst the right hand holds the handles and separates the blades, the dilatation can be done slowly and deliberately, with less tendency to slip out and with less pain than with the old instrument.

"With regard to the result of dilatation of the cervix for the cure of sterility, my experience is based upon the treatment, by dilatation with the steel instrument, of more than two hundred women who were sterile because of a defect in the calibre of the cervical canal, either from stenosis or flexion, resulting from imperfect development. Where the sterility was the result of obstruction, dysmenorrhœa was almost invariably present. This experience leads me to the conclusion that, although the canal is made so patulous by dilatation as markedly to improve the dysmenorrhœa, and in many cases to cure it permanently, the sterility remains in the vast majority of cases if the patient has been married more than

three years before coming under treatment; and if she had attained the age of twenty-six or twenty-seven years before marriage, then, though she come under treatment immediately afterwards, she will very likely be sterile. This will apply to the great majority of cases, but not to all. I think the reason may be stated as follows. The long-continued hyperæmia of the uterus, the result of dysmenorrhœa, which probably existed from puberty, and especially from the non-fulfilment of the sexual function by conception, gives rise to such changes in the histological elements of the uterus that, instead of the organ being muscular, and therefore possessing its natural resiliency, elasticity, and suction-power, it is hard, fibrous, and non-elastic. The mucous membrane lining the cavity also becomes so changed in its character that, if fecundation should take place, there is not a proper nidus furnished for the reception of the ovum, and it passes off without forming an attachment. The tissues of the Fallopian tubes are likewise changed, and the tubes narrowed in consequence. This might explain the persistence of the sterility after the dysmenorrhœa has been relieved by dilatation of the cervix."

Dr. J. C. DA COSTA had modified the Ellinger dilator by having the blades made very stiff and with a knob at the extremity, as in the uterine sound. When necessary, he makes use of counter-pressure over the fundus. In some cases he uses a small instrument first to enable him to introduce the more powerful one through the internal os.

Respecting the statement of Dr. Baer as to the incurability of sterility of three years' standing, he had recently had under treatment a lady who had one child seven years ago, but had since been sterile. The uterus was sharply anteverted. A dilator was used for the relief of the flexion, and three months later the patient exhibited all the early signs of pregnancy.

Dr. BAER remarked that this case was not one of the class to which he had alluded. This patient had had a child, and anteversion—probably the result of subinvolution and endometritis—was the cause of the sterility. Failure occurs in cases which have never been pregnant, and in which the uterus is enlarged, hard, and changed in its histological character. He thinks it desirable to avoid multiplicity of instruments, and to have one dilator small enough to enter any os, and so arranged as not to yield to any pressure, but under all circumstances to preserve the parallelism of its blades.

Dr. THOMAS thought that one reason why the sponge tent did good work was because it worked slowly and continuously. Four years ago he made drawings of a modification of the steel dilator to accomplish the same end. The instrument was made somewhat shorter than the ordinary one. The blades

were absolutely parallel on the outside edges, and were approximated by means of a screw passing through a slot in one handle and attached to the other. A milled head traversed this screw, and between it and the handle of the dilator was placed a spiral spring or a soft-rubber pad. This instrument was intended to remain *in situ* for twenty-four hours, the spring making the action gradual and continuous, one or two turns of the screw being given every two hours by the doctor or a nurse properly instructed. The doctor thought that in this manner he could secure many of the advantages of the sponge tent and at the same time avoid its dangers.

Dr. R. P. HARRIS had recently seen, in a foreign journal, diagrams of a very neat instrument to accomplish the same purpose. It consists of a C-shaped spring, to the ends of which are attached blades long enough to pass through the internal os. The fingers pressed upon the top and bottom of the C closed the instrument for insertion. Its action would be regulated by the strength of the spring. To obviate the danger of slipping too far into the uterus, a dilator with diverging blades could be furnished with shoulders to rest against the cervix. The divergence of the points of the blades he considers an advantage. The feathering reduces the apparent divergence in use, and that which remains helps to retain the instrument in place, particularly if the blades are furnished with shoulders. The dilating power is strongest where it is most needed, at the internal os. To meet an objection advanced by Dr. Thomas, he suggested that the shoulders might be made movable to suit uteri of different depths. In every case in which a dilator is used, the patient should be kept in bed until the direct effects are over.

He had recently under observation a case of dysmenorrhœa in which the dilator was used without effect, but in which a sponge tent effected a cure.

Dr. BAER thinks that the blades should be parallel and that dilatation should be uniform, without regard to the point of greatest constriction. Too much should not be expected from the dilator. A case of dysmenorrhœa could not be cured by one treatment. It is by the repeated use of the dilator at proper intervals that the best results are to be secured. As an instrument, it replaces a set of graduated sounds, and the original inventor must have had that object in view. The contractility of the uterus must be overcome gradually. Even where tents are used, contraction will recur. The advantage of the dilator lies in its comparative freedom from danger and in being less troublesome to the physician. It is indicated whenever there is constriction from any cause; for if there is not good drainage for uterine discharges there will surely be irritation, resulting in endometritis.



The effect of the dilator on hypertrophy is the same as with sterility. If of long standing, it is not curable. After the hard, fibrous stage is reached, no reduction results from its use; but if the condition is recent and the enlargement is of the muscular elements or is due to engorgement, a cure may be secured, because here we have nearly the same condition which exists after labor,—viz., a muscular uterus having the power to contract and involute. I do not believe that chronic hypertrophy of long standing will, as a rule, yield to any treatment; but the symptoms to which it gives rise can be relieved to a very great degree in most cases.

Dr. ALBERT H. SMITH regrets that Dr. Baer has not seen the admirable effects of the sponge tent on uterine hyperplasia. If you use a steel dilator in the uterus, it can remain but a very short time,—practically not more than five minutes,—giving a sudden mechanical dilatation accompanied by probable rupture of the hardened fibres of the cervical canal; but it cannot give that stimulation to the contractility of the uterine muscles and to cell-action that results from the use of the sponge tent when no inflammatory action is existing. There is great resistance at first, but after the lapse of forty-eight hours the internal os and uterine walls have relaxed, spasmodic contraction ceases, and the vital power and muscular contractility of the uterus are developed by the presence of a foreign body which the natural powers will try to expel. Just as you have after the expulsion of an ovum a physical atrophy of the uterus, so you will have a similar action set up by the presence of a sponge tent in the cavity of the uterus. No such result could be secured by the use of a steel dilator. The latter must lacerate and leave surfaces ready to absorb septic matter, while you have not the advantage of the presence of the salicylic acid or other disinfectant present in the tent. The latter, expanding slowly, is not likely to cause laceration. The too early removal of the tent, while the spongioles are fast in the uterine tissue, may leave an abraded surface; but after forty-eight hours the tissues have shrunk away and the sponge comes away easily. Dr. Smith read the following letter from Dr. Mundé:

"MY DEAR DOCTOR,— . . . Remembering your remark with regard to the absence of proper dilatation of tupelo tents, I procured a number from Tiemann & Co., and dilated them in tepid water. I send you by this same post four different sizes, dilated and undilated, and also two perforated zinc-lined tents, to be worn during the period, for dysmenorrhœa, —one before, the other after, dilatation.

"This amount of dilatation was reached within one hour. Certainly no fault can be found with the expansion of these tents, since it will be seen on comparison that all the tents have swelled to fully double their compressed

size, and have retained their expansion on being dried. It may be objected that this full dilatation would probably not take place if a resistance were offered as in the uterine canal. While I partly admit this, still I have within a month had reason to use the largest size to dilate a uterus, and secured quite as much expansion as shown by the accompanying tent. The softness of the wood allows of their being whittled to any size and shape.

"I also send a tent dilated in utero, which shows some contraction at the site of the internal os.

"I presume that the failure of your tents to dilate may have been due to their having absorbed moisture from the atmosphere. They should always be kept wrapped in air- and water-tight paper. Tiemann & Co. tell me that all their tents are compressed to their utmost by machinery.

"As for the other forms of dilatation, I have used the steel two-branched dilator of Ellinger almost exclusively. I found it too difficult to force the graduated hard-rubber sounds through the cervix if it is virginal and hard; the tenaculum tears out, and the force is too great. I have dilated in hospital and private practice (with two-branched dilators) in about one hundred and fifty different cases, probably some six to seven hundred times, chiefly for dysmenorrhœa and sterility, always in my office or dispensary. I have almost invariably relieved the dysmenorrhœa, temporarily at least; the sterility but rarely, although my later statistics on this point are meagre. I have but one bad result,—pelvic peritonitis; and then curetting and tincture of iodine to the endometrium were also employed, either of which might be blamed. I prefer steel divergent dilators for temporary, tupelo tents for permanent, results. Slippery-elm tents dilate but little; but I have found them good in dysmenorrhœa to render the canal patent."

Dr. R. P. HARRIS is using cylindrical sponge tents coated with salicylic acid, and finds that it has a local anæsthetic effect on the lining membrane of the uterus.

Dr. A. H. SMITH, of the steel dilators which he has tried, prefers the instrument devised by Dr. T. G. Thomas, in which the blades are separated by being drawn into a canula by screw-action. It is, however, difficult to clean. He has found the handles of Dr. Ellwood Wilson's dilators very much in the way when the uterus is anteflexed.

Dr. BAER remarked that he was much instructed by Dr. Smith's remarks. He was surprised at the time—forty-eight hours—that a sponge tent could be allowed to remain, and at its effect in the disintegration of abnormal tissue without the development of septicæmia. He finds it hard to believe a change could ensue after the uterine walls had been changed to hard fibrous tissue; but experience is the best teacher.

## NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 17, 1882, Dr. FORDYCE BARKER, President, in the chair.

After the reading of the minutes of the previous meeting by the Secretary, and various committees had handed in their reports, the President introduced Dr. H. G. PIFFARD, who exhibited one of Dr. L. P. Felton's medical batteries, which had formerly been presented at the New York State Medical Society, and which was described in the *New York Medical Record* for February 4, 1882.

The President then introduced Dr. FRANK H. HAMILTON, the author of the scientific paper of the evening, entitled "The Struggle for Life against Civilization and Æsthetics: A Supplement to the Discussion on Plumbing, etc."

Referring to the meeting of the Academy on February 2, 1882, the author reviewed the introductory remarks of the President, then Mr. Wingate's paper on "Practical Points in Plumbing: Knowledge necessary for Physicians for the Protection of their Patients;" and the discussion which followed, pointing to the general agreement of all with regard to the evil influences which sewer-gas has in the promotion of, if not itself positively originating, many diseases which afflict the inhabitants of our cities; to the defects in our present plumbing-work, and to the necessary destruction thereof in time by the chemical action of the gases, etc., constantly in contact with them; to inefficient ventilation due to the present methods of heating our houses, etc.; criticising, as he proceeded, the inefficiency of the methods proposed by the speakers for the removal or the avoidance of the existing evils, and in some instances their conflicting statements regarding points of a scientific nature. Was it surprising, the author said, that, considering the deadly nature of these gases and the impracticability or the inefficiency of all or nearly all of the measures for their exclusion, Dr. Parker hesitated to accept Mr. Wingate's suggestions, believing that it was foolish to take the risks to health from modern modes of plumbing, and that he declared, at the close of the discussion, that if he were to build a house he would not have it connected in any way with the sewer?—that he would have all the closets and drains and pipes in an annex? Such, too, was the conclusion at which many of our most wealthy physicians had arrived; and not a few of our best mansions were built on that plan. What, then, was the upshot of all this matter, if the sanitary engineers, the plumbers, the chemists, and others who took part in the discussion had nothing more to suggest? With all respect to those distinguished gentlemen, he did not think they had suggested anything new,—anything, indeed, which had not been tried before and which had for one reason or another proved impracticable or inefficient. His reply to these questions was that with

reference to these matters science had not kept pace with civilization, and there was at present no adequate remedy. We had had occasion to observe that when men left the open plains and small hamlets and crowded into cities the ratio of sickness and death was increased. Civilization in cities having deprived us of a large proportion of our oxygen, the plumbers had at last rendered actually poisonous what remained, by connecting almost every room in our houses, directly or indirectly, with the sewers. Our water was not free from these gases and the fatal germs generated in these foul places. Dr. Parker thought he had never seen a case of diphtheria in this city until Croton water was introduced. Possibly nothing would more forcibly illustrate the magnitude of the evil we were considering than the fact that it had given birth to a new profession,—namely, sanitary engineers, who were supposed to be well informed in matters of hygiene, architecture or house-construction, and engineering, and who seemed to find plenty to do, and no doubt were performing a much-needed and very useful service; but he might add that up to the present time there was no evidence that they had done any more than to mitigate the evils which they were asked to remove. Indeed, there might be found many a notable example in which the best sanitary engineers had failed to effect even a mitigation.

In order to render the atmosphere of our houses free from sewer-poisons and make it pure and bring the health of our citizens up to its proper standard, civilization must make some concessions. He used the term civilization in its widest sense, including the luxuries, comforts, and æsthetics of life. If concessions were not made, he feared we should not be able to contend successfully with typhoid fever, diphtheria, etc. Up to this end, he believed that all plumbing-work would have to be excluded from those portions of our houses which were habitually occupied, to centre in a separate building or annex; second, that we return to the open fireplace or grate as a means of warming our private houses; third, that there should be a diminished consumption of oxygen by gas-burners. It was still an open question whether we should be able to light our dwellings with electricity; but so long as we were obliged to depend upon gas we must content ourselves with light and not insist upon illumination. The concessions mentioned admitted of no compromise; but there were numerous other sources of decay incident to civilization, such as the exclusion of the wholesome sunlight from the apartments of the wealthy and others, to prevent the fading of carpets, etc. Fashion and civilization demanded that both children and adults should devote the hours which ought to be spent in sleep to amusements which were rendered the more pernicious by prolonged respiration of hot and poisonous air.

Utility and regard for health were made almost completely subservient to fashion in dress. Clumsy head-dresses, low necks, short sleeves, tight corsets, high heels, and narrow toes did not constitute the sum total of æsthetic requirements of civilization for dress. Walking was rendered difficult, and sometimes it was impossible to run or even move with rapidity; and sharp angularity was unseemly in young ladies. The tall young man, as he moved in the most refined and polished circles, posed in attitudes which demanded the most feeble exercise, or dawdled in effeminate dissipation. Ladies did not sit, but reclined, in their carriages. In the best society there was no muscle or backbone. Almost all respectable citizens rode when they might walk, and complained of want of breath when the absence of an elevator compelled them to ascend a stairway. We travelled in badly-ventilated, crowded cars, and were sick on reaching the end of the journey. Railroads had enabled men to accomplish much more by their rapid transit, but it was a question whether this compensated for the health and length of life which were foregone in part on putting aside horseback and stage travel. The field opened for discussion by this paper was wide and inviting, but he would request the Society to limit its remarks to household sanitation.

#### DISCUSSION.

Dr. DOREMUS again explained and demonstrated, as at the former meeting, how gases permeate brick and stone and are dissolved more or less by water. Notwithstanding his demonstrations, the President of the Board of Health asserted that it was not true; in other words, that good sound plumbing, with good traps, was a safeguard against the passage of these gases into our rooms. Every one was familiar with the chart on the wall, which showed that all gases were to some extent soluble in water, and Dr. Doremus said that unless we employed some chemical which decomposed these gases it was impossible that our pipes, dipping down into the sewers, should not allow the gases to enter our rooms. But by using some material which by chemical action destroyed or decomposed these gases we likewise destroyed the germs which might be present at the same time. At the President's request, Dr. Doremus went on to explain what he considered to be the cheapest and most effectual method of effecting the decomposition of the gases in the pipes, etc. The manganate of soda and the sulphate of magnesia were very cheap, and had been used in the water-closets at Bellevue Hospital. A very cheap substance recently devised was the chloride of zinc. It would be well to put a spoonful of some of these substances into the water-basin whenever used. An arrangement might be devised by which, when the water was turned on in the closet, some of the chemical would also enter.

Dr. BILLINGS, of the United States Army, having been invited to be present at the meeting, arrived late, but in time to hear the latter part of the paper. He said he was unable to tell beforehand from its title what was to be its nature, and was little prepared to make remarks. While he agreed in general with what he had heard read of the paper, he thought it took rather too gloomy a view of the possibility of dealing with the causes of diseases that were incident to modern civilization, and more especially with those causes which were incident to modern dwelling-houses in large cities. First, as to plumbing and getting rid of the excreta: while it was perfectly true, as Dr. Doremus had demonstrated, that the gases were absorbed by the water in large quantities, and would be given off on the other side of the trap or water-seal, it must not be forgotten that these gases were not present in the air and the soil-pipe in such proportion as they were in the flasks before us. Experiments had been made demonstrating the amount of gas generated in one of these pipes both while it was open above and while closed. In the first case, during four hours the amount collected was scarcely appreciable; in the second, the amount was about trebled. This experiment was made in a house which was supposed to have a very foul soil-pipe. When free communication with the air above existed, and a trap shut off communication from the interior of the house, the amount of dangerous gas generated in the pipe was so exceedingly small that it was not worth while to take it into consideration. As to the question of the danger of these gases to health, a line of distinction was to be drawn. Some parties went so far as to say that the gases were not at all dangerous to health. He believed it was extremely probable that what we call specific, infectious, contagious diseases were not produced by the ordinary gases which arise from the decomposition of organic matter, whether that matter be animal or vegetable. If diphtheria, scarlet fever, etc., could be produced by gases arising from decomposition of animals, or decaying vegetable matter, under almost any conceivable conditions of temperature or moisture, it was impossible to explain why these diseases were not constantly present in such places as the large cities of India and China, for example. It was impossible to explain why they should be more prevalent with us now than they were fifty years ago, if they do not confine themselves to the cities. It was probable that these diseases were due not to gases, but to minute particles, which were not gases or liquids. He did not like the term sewer-gas, but preferred to say gas from sewers, as this might be composed of several, or vary under different conditions, according to what the sewer contained, etc. But it was going too far to say that these gases could not cause disease,

as seemed to be the tendency among some sanitarians. Constant exposure to sulphuretted hydrogen, for instance, would cause disease, as was proven in the experience of workmen employed where it was generated. While foul gas did not produce a specific infectious disease, it did, nevertheless, affect the tone of the constitution, and predispose the animal economy to breaking down on the first appearance of the immediate cause of the specific disease. This was evident from the fact, as proved by experiment, that if the most dangerous gas known were diluted sufficiently it would have no appreciable effect upon the health; whereas minute particles of specific contagia were dangerous when diluted, and produced the specific disease in its original severity. Reference was made to experiments with vaccine matter, which, when highly diluted, though it sometimes failed to take, when it did take produced effects similar to those produced by the undiluted matter. In the matter of ventilation, since foul gases highly diluted were not dangerous to health, that was the object sought for. It was almost or quite impossible to obtain perfect ventilation of buildings, which would imply our breathing no particle of air which had been inhaled by others in the house. To attain this end involved trouble and expense which none but the government could meet. What was attempted in the way of ventilation was simply to dilute the foul air with pure air. The practical difficulty did not seem to consist in the proper arrangement for ventilation and other health-conditions of a single house, but how to enable each householder in a city who was intelligent, and desirous of obtaining health-conditions, to secure the services of individuals who knew how and could be trusted to do work properly. It was well known that many of those who professed to know how to do work fulfilling these conditions, either unknowingly or knowingly, made a failure.

The author of the paper seemed to take the ground that we should have to go back to open fireplaces, and that, on the whole, we were, as a race, deteriorating from the effects of civilization. It seemed to be the general opinion that the children of nature, those people who live in the open air, are very much healthier as a people than we who live in cities. Statistics, however, so far as they went, did not prove such to be the case. Among the Indians, on the contrary, the death-rate was decidedly greater. He was of opinion that the statement made, that we should have to go back to the open fireplace, was, upon the whole, made without sufficient reflection as to what that would imply, and a consideration of the means which we have of sufficiently ventilating our houses if we chose to make use of it. But it would cost more,—from two to ten times as much; larger heaters would be required than were commonly used;

we must not seek to get more heat by raising a small surface to a higher temperature; nor in regulating the amount of heat should we be allowed to cut off the air by which our rooms are ventilated. We could not have good heat, good ventilation, and cheapness: we might have any two of them, but we could not get the three together. The problem, therefore, was, not the possibility of securing proper plumbing, the removal of excreta, etc.; that was all possible; but it was to secure a method by which a man of moderate means could obtain the services of one who had the skill and the honesty to do it. We had plenty of sanitary engineers, so called, but those in the country who were thoroughly competent he could count on his five fingers. Men must be educated to the calling, because they found their services appreciated; the demand must be created, and when this existed men would be forthcoming to fill the place. The medical profession must be the leaders and teachers of the public in this matter: make a demand on the part of the people for sanitary conditions; then through the Legislature have proper laws passed regulating plumbing and building. Unto this end the physician must have some knowledge of the sanitary engineer's business, and the sanitary engineer must be well instructed in hygiene, physiology as it relates to health, and much knowledge which is generally supposed to be confined to the physician's learning. Physicians should understand the importance of going slow in making assertions, founding them upon well-established facts, lest they be carried away upon the wave of sentimental opinion, and afterwards a reaction come and they reap discredit instead of honor. The medical profession of a town or city at times admitted the unhealthy condition of their homes; but if it were mentioned by those abroad, or those belonging to neighboring towns, who might have rival interests, it was said to be done with an object for commercial purposes, and the profession were then too apt to defend the sanitary condition of their respective cities, regardless of the true state of things, instead of having the sole object in view, the improvement of the health of the people. The whole subject was a very wide and complicated one, and could not be fully considered on a single evening.

Dr. H. SMITH said that the water in our pipes was almost constantly changing, which prevented the absorption of any great amount of gas; this fact also militated against the possibility of disinfection by chemicals. The fact that plumbers, who, as it were, lived among these gases, were not greatly subjected to typhoid fever and zymotic diseases, would tend to show that less danger to health arises from such gases than some would have us believe. With reference to leaks in waste-pipes, he thought they might be discovered in the way



they were discovered in the water-pipes,—namely, by placing a cock below in such waste-pipes, and from time to time filling them with water, when if a leak were present it would become manifest. He thought it unnecessary to have an annex into which all the waste-pipes, etc., should be carried, apart from the regularly-occupied rooms; let all be connected with a shaft which had free ventilation above, as was the case in his own house, and it would answer an equally good purpose, and allow us to retain all the conveniences pertaining to the present system.

Dr. HAMILTON, being called upon to close the discussion, said that if he appeared before them in the light of a pessimist, he thought his friend Dr. Billings must have appeared in the light of an optimist. The latter had questioned the character and malignancy of those poisons and germs which we had generally believed to come from the sewer; and he believed that there were always measures at our hands adequate for their exclusion. He found that the gases in the pipes were trivial in quantity, provided they had an appropriate escape through the soil-pipe; he found that the amount which under any circumstances might be admitted into our rooms was not likely to produce any pernicious effects. He said that medical men determined facts chiefly by probabilities, and did not absolutely and dogmatically affirm. It seemed to Dr. Hamilton that if anything were probable it was that sewers contained poisons, and generated poisons, and not only so, but that they conveyed poisons, whether generated there or not, which were capable of producing certain diseases, specific or not. If there were a means of making the pipes so secure that these poisons could not escape from them into the room, the question still remained, how could we prevent those pipes from going into a state of decay and unexpectedly overflowing us with their impurity? Was not disease of the character which we had always attributed to these poisons increasing? "They say they have suggestions to make which ought to be tried; but have we not been trying suggestions during the past generation until that generation is dead? Shall we continue to try suggestions, or recede somewhat until Dr. Smith and Dr. Billings have tried their own suggestions successfully? Is it not time for us to stop experimenting awhile until we try to find out a way of being in a more healthy condition by the abnegation of these supposed sources of debility and disease? Dr. Billings said that we need not return to the old fireplace method if we would spend five times as much money to heat our homes; but I cannot afford it, and I presume the majority of those present cannot afford it. The gentlemen have not suggested anything better to-night than had been done on the previous night."

Dr. JANEWAY wished to say a word with

regard to Dr. Hamilton's statement that sickness and the death-rate were increasing. That was a question which must be looked upon from different points of view, in order to get at the truth. The death-rate from a given disease and the general death-rate might be greater this year than last, and yet the sanitary conditions of the city might be better this year than the previous one,—a fact to be accounted for by the tendency of certain diseases to exist epidemically or endemically at certain times, depending upon other conditions than bad sanitation, and by other reasons. Such sources of error might be avoided, to a large extent, by comparing the past ten years with the ten years previous. The death-rate this year in New York City was greater than last year, and some might ignorantly suppose, therefore, that clean streets had not a tendency to ward off disease and increase the average duration of life, or even say that clean streets caused a greater prevalence of disease and a greater death-rate. This, however, was to the intelligent citizen evidently an error. "Physicians know that it is due to overcrowding from our rapidly-increasing population, to the foothold which certain contagious diseases have acquired, etc., and not because the streets are cleaner. The small-pox epidemic which the newspapers say is prevailing in South Bethlehem, Pennsylvania, at present, cannot be due to bad sanitation, for it spread very widely, and among those in the healthiest neighborhoods, in two days, which was evidence enough that it was introduced perhaps by the presence of an unobserved mild case in that particular part of the town, or was due to the fact that a large number of this better class attended the funeral of one who died of smallpox, or to some other similar cause." He would challenge any physician to prove that a single case of, for instance, smallpox or scarlet fever had originated from bad sewerage or gas from pipes. If it apparently or really came by that channel, it would be found, on diligent search, that it first originated in the same disease affecting another person. We seemed to have pretty conclusive evidence, however, that typhoid fever sometimes originated in the condition of the sewerage, and perhaps the same was true of diphtheria.

In illustration of his statement that proposed changes in favor of sanitation by sanitary engineers, when carried out, had not usually improved matters, Dr. Hamilton referred to the case of Memphis, whose sewerage system, etc., was altered in accordance with the plans of Colonel Ware, but the next year, and afterwards, the death-rate and sickness had been greatly increased.

Dr. BILLINGS explained that Colonel Ware's suggestions were carried out only in part; that the system was completed by the officials of the city, who, instead of having the sewers empty into the Mississippi, as proposed by

Colonel Ware, had them empty only a short distance below the source of water-supply, and into the same stream from which this was derived, so that the two waters, when the stream rose, were mixed: hence their great amount of consumption and general sickness. By this change in the proposed method the citizens saved five hundred dollars!

After hearing certain reports, the Academy adjourned.

## REVIEWS AND BOOK NOTICES.

LECTURES ON ELECTRICITY (DYNAMIC AND FRANKLINIC) IN ITS RELATIONS TO MEDICINE AND SURGERY. By A. D. ROCKWELL, M.D. New York, Wm. Wood & Co., 1881. Pp. viii., 122.

These lectures, originally published in the *Virginia Medical Monthly*, were intended to give in a concise form the status of electrotherapeutics as then existing, and in this the second edition of the book the subject has been brought up to date by the consideration of static electricity,—a long-forgotten yet nevertheless extremely valuable form of electro-therapy. It is to be hoped that the reaction in its favor at present existing will not be spasmodic or transitory, but that study will be given to this department of electricity under the improved methods we now possess of generating it. The writer has found it to be indispensable as a part of his ordinary outfit. The eight chapters are well-condensed expositions of electro-physics, physiology, diagnosis, surgery, and general medical application, with a thorough description of the various forms of apparatus employed; and, as would be expected from the distinguished author, particular stress is laid upon the value of *general faradization and central galvanization*, neither of which methods has been well understood or properly appreciated by the profession at large, or, indeed, by electro-specialists. That general faradization is indicated much more frequently than it is employed is beyond question, and that a wider appreciation of its absolute tonic effect is desirable cannot be doubted. It is therefore to be hoped that this little work will stir up electrotherapeutists to a better comprehension of the fact that electricity in all its forms is something more than a mere stimulant or sedative. A description of the latest novelties in electricity closes the book,—the induction-balance and the storage-batteries of Trouve and Plante. The probability of the latter overcoming the defective working inherent to galvano-caustic batteries is worth noting. Illustrations are freely used, all of which are good. The mechanical execution of the book is excellent, and the work, though unpretentious, is full, explicit, and readable. It well deserves a place on the shelves of every phy-

sician and surgeon who desires to understand the value of electrotherapeutics,—an indispensable part of his armamentarium.

W. R. D. B.

## GLEANINGS FROM EXCHANGES.

CELLS CONTAINING RED BLOOD-CORPUSCLES.—Dr. Osler, of Montreal (*Lancet*, February 4, 1882), says that he has noted the occurrence of cells containing red blood-disks in the lymphoid marrow of the bones of pernicious anæmia, "in three cases very abundant, in two in moderate numbers. An examination of the marrow in over seventy-five persons of all ages and dead of various diseases has led me to conclude—1st, that cells containing red blood-corpuscles are normal elements in red marrow; and, 2d, that it is impossible to connect their presence with any particular disease. I have found them very numerous in cases of phthisis (2), pneumonia (1), typhoid fever (2), ulcerative endocarditis (1). They were present in the marrow of a fœtus at the sixth month, and in that of the sternum of an old man of seventy-six. I do not remember ever having any difficulty in demonstrating them to students in the ordinary red marrow of the rib. Litten and Orth\* speak of these cells as occurring in a considerable proportion of the cases which they examined, and they also could not connect their occurrence with any special set of conditions. As in the spleen, they present remarkable variations in number, in some instances being scanty and difficult to find, in others so abundant that each field of the microscope contains several examples. On the structural peculiarities and development of these cells I will not here dwell further than to say that each one may contain from one to ten or twelve red corpuscles, which may have a perfectly natural appearance, or be in every stage of transformation into brown pigment-grains. I have notes of the occurrence of these cells in the following localities:

"1. In the connective-tissue cells of the embryo and new-born animal. Here, in all probability, the red corpuscles are in process of development (Schäfer).

"2. In red marrow, of which they form a normal constituent, but, like the myeloplques, occur in very variable numbers.

"3. In the spleen pulp, normal element (Kölliker), they are particularly abundant when the organ is rich in pulp, as in the acute swelling of fever.

"4. In lymphatic glands when in a state of congestion and tumefaction; not a constant feature, but sometimes very numerous.

"5. In brown induration of the lungs, part, at any rate, of the pigment in this condition results from the ingestion of red corpuscles (which leave the engorged vessels by diaped-

\* Berliner Klin. Wochenschrift, 1877.

desis or extravasation) by the cells of the alveolar stroma, in which they gradually undergo transformation into brownish-red grains.

"6. In the neighborhood of extravasated blood the connective-tissue cells, fixed and amoeboid, are often found to contain red blood-corpuscles, which can be traced in all stages of degeneration into pigment-granules.

"Artificially, I have seen these cells produced by feeding lively white blood-corpuscles of the newt or frog with human red blood-corpuscles. I have a sketch of a colorless blood-cell of the newt distended with four red corpuscles which it had eaten."

**SCHIZOMYCETES, OR MICROBES.**—The recent introduction into medicine of a number of new terms, springing out of investigations into the origin of certain diseases which are likely to be frequently encountered, makes it important that definite meanings should be attached to them by those who employ them, in order not to be misunderstood by those who hear them. The *Popular Science Monthly* gives the following classification of Mr. W. Hamlet of the microbes (microscopic organisms of fermentation and disease). 1. Microbes which appear as points are called *monads*, *monera*, or *micrococci*. They are motionless, and may be regarded as the spores of other microbes. 2. Motionless linear microbes,—the *bacteridians* and the *bacilli*. To them belong *Bacillus anthracis*. 3. Cylindrical mobile microbes, having rounded ends or contracted in the middle so as to form an 8, are the *bacteria* proper. Among them is *Bacterium termo* of putrefaction, the commonest of all. 4. Flexuous mobile microbes. They look and act like eels, and differ but little from the equally active bacteria. They are the *vibrios*. 5. Spiral microbes, resembling a corkscrew, and mobile,—*Spirilla spirocheta*. Their presence in human blood appears to be connected with intermittent [relapsing—Ed.] fever. 6. Microbes with heads, very active, having globules larger and more refractive than the rest of the body at one or both ends. These globules are apparently spores ready to be detached from the bacterium,—*Bacterium capitatum*. Besides these six principal states, the microbes form agglomerations or colonies that often notably change the aspect of the elementary cells, and which have received various names. Agglomerations in microscopic masses, surrounded by a jelly that sticks them together and deprives them of motion, are called *zooglæa*. A non-gelatinous membrane formed of motionless bacteria is a *mycoderma*. Bacteria attached end to end in a string form filaments of *leptothrix*. A number of spherical micrococci joined one after another form the string of round grains called a *torula*. A considerable number of species may be included in each of these divisions; and there does not appear at present any way of distinguishing by sight a disease-producing bacterium from a harmless one.

**FORMATION OF HYALINE TUBE-CASTS.**—In an article on the "Histological Lesions of the Kidney in Albuminous Nephritis," by V. Cornil (*The Practitioner*, February, 1882), the morbid changes in the kidneys in albuminous nephritis are studied by the aid of pathological specimens obtained from a case occurring spontaneously in man, by which, also, the mode of formation of hyaline cylinders is demonstrated. The patient had an attack of acute Bright's disease after exposure to cold. Death, preceded by anasarca and uræmic coma, occurred seven weeks later. Post-mortem examination of the swollen, injected kidneys demonstrated very plainly the rôle of the renal cells in the production of intra-tubular exudation. A vacuole filled with liquid first forms in the interior of the epithelial cells, which projects; then the wall of the cell breaks, and a little drop falls into the cavity of the tubule. "These clear or granular globules are observed in greater or less quantity—i.e., in a greater or less number of urinary tubules—in every case of albuminuria." The chemical nature of these globules does not appear to have been as yet perfectly determined. Besides these, the exudation is composed of red blood-corpuscles, leucocytes, and blood-serum, the latter constituents being more manifest in these glomeruli. "The farther these different parts of the exudation pass on from the place where they have been poured out, the more do they become mixed into a homogeneous mass,—liquid at first, and then dense and colloid,—which coagulates. Such is the origin of hyaline casts. . . . The narrow parts of the tubule which compose Henle's loop form a kind of wire-drawing apparatus, and as the colloid coagulum passes through them it is drawn out like a thread, taking a regular form, which it preserves in the wide intermediate convoluted parts of the tubule and in the straight tubule. These are veritable hyaline casts."

**NITROUS OXIDE GAS AS AN ANÆSTHETIC DURING LABOR.**—Dr. Klikowitsch, of St. Petersburg, advocates (*Archiv für Gynaekologie*) the use of nitrous oxide during parturition. The high cost and the want of portability of the apparatus for administration, however, will prevent its use to any extent in midwifery, for which it otherwise possesses obvious advantages.

**TETANUS SUCCESSFULLY TREATED BY CHLORAL AND BROMIDE.**—Dr. J. W. Salter, in *The Practitioner* (p. 99), reports a case of traumatic tetanus in a man 51 years of age, successfully treated with large doses of chloral and bromide, administered in doses of ten or fifteen grains, sometimes every half-hour, but usually every two hours,—occasionally at longer intervals. The total amount given in the twenty days of treatment was sixty drachms of chloral and eighty drachms of bromide, or three and four drachms per diem respectively.

## MISCELLANY.

ACCORDING to official reports, 21,990 people were killed in 1880 by wild beasts, 19,150 deaths being from snake-bite.

PUERPERAL INFECTION IN THE MALE.—I see an extract from the *Centralblatt für Gynäkologie* copied in several medical journals in regard to a case of fatal puerperal infection of the male, in which the husband had intercourse with his wife after it was supposed she had entirely recovered from an attack resembling puerperal fever. During an epidemic of puerperal fever which occurred in Nelsonville a few years since, my brother, Dr. D. Lod. Gilliam, now of Columbus, Ohio, and myself were attending a colored woman who had an attack of what we diagnosed as puerperal fever. One morning, after she had begun to convalesce, we noticed some bad symptoms, and on inquiring she told us that her husband had insisted on having intercourse with her, and, she being too weak to resist, he had accomplished his desires. She made a good recovery in course of time, but her husband was attacked two or three days after the occurrence we have related with erysipelas of the penis and scrotum, followed by gangrene and extensive sloughing of the parts, and died on the sixth day with well-marked symptoms of septicaemia. He acknowledged to having had intercourse with his wife, and attributed his disease to that. Some weeks before his sickness he had been under treatment for gonorrhoea; but I do not know whether he had recovered at the time of his sickness. If not, probably that might have been the cause of his infection.—CHAS. F. GILLIAM, M.D., NELSONVILLE, O.: *Detroit Lancet*.

THE Supreme Court of Pennsylvania has decided that a professor in a college is merely an employé, and not an officer: hence he can be discharged at any time without more formality than is used in getting rid of a cook or a clerk. The decision was rendered on the occasion of the discharge by the corporation of Lewisburg University of the professor of mathematics and natural philosophy.

DR. THOMPSON (*British Medical Journal*) treated three cases of tetanus, with two recoveries, by the hypodermic use of one-sixth of a grain of extract of physostigma.

DRS. LEPINE AND GUÉRIN state (*Revue Médicale*) that there is an excess of unoxidized sulphur in the urine in cases of disturbance of the biliary function.

DR. CLUBBE (*Lancet*) treated successfully a case of diabetes insipidus by faradism over the kidney employed every day for about twenty minutes for twenty weeks.

To dry up the flow of milk, Dr. Martin (*Medical Times and Gazette*) covers the breast with freshly-picked parsley-leaves, which are renewed several times per day. They act speedily and effectually.

DOLARINA AS AN ANTHELMINTIC.—This is an alkaloid extracted from a species of fig, *Ficus dolarina*. It is regarded in Brazil as of value against the helminthoid which produced the St. Gothard Tunnel epidemic. Dr. Buzola (*Gazette des Hôpitaux*) has given it in powder form with good results to the laborers attacked by this particular parasite.—*Chicago Medical Review*.

## OFFICIAL LIST

## OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 5 TO MARCH 18, 1882.

ALEXANDER, R. H., MAJOR AND SURGEON.—Now awaiting orders, to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 52, A. G. O., March 6, 1882.

BROWN, H. E., MAJOR AND SURGEON.—Having reported at these Headquarters, will proceed to Jackson Barracks, La., and report to the Commanding Officer for duty. S. O. 32, Department of the South, March 14, 1882.

DICKSON, J. M., CAPTAIN AND ASSISTANT-SURGEON.—Now awaiting orders, to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 52, A. G. O.

LAUDERDALE, J. V., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty in the Department of the South, and to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 52, c. s., A. G. O.

FINLEY, J. A., CAPTAIN AND ASSISTANT-SURGEON.—At expiration of his present leave of absence, to be relieved from duty in the Department of the East, and to report in person to the Commanding General, Department of Texas, for assignment to duty. S. O. 52, c. s., A. G. O.

PORTER, JOSEPH Y., MAJOR AND SURGEON.—Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 32, c. s., Department of the South.

GARDNER, EDWIN F., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, to report by letter to the Surgeon-General. S. O. 52, c. s., A. G. O.

ROBINSON, S. Q., CAPTAIN AND ASSISTANT-SURGEON.—To report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, to report by letter to the Surgeon-General. S. O. 52, c. s., A. G. O.

The following-named officers of the Medical Department will report in person to the President of the Medical Examining Board, in session in New York City, for examination for promotion, and, on its conclusion, return to their stations: Captain WM. H. KING, Assistant-Surgeon, Fort McHenry, Md.

Captain H. S. TURRILL, Assistant-Surgeon, Madison Barracks, N.Y.

Captain W. REED, Assistant-Surgeon, Washington Barracks, D.C.

Captain H. S. KILBOURNE, Assistant-Surgeon, Fort Porter, N.Y.

Captain M. W. WOOD, Assistant-Surgeon, Fort Brady, Mich.

" R. W. SHUFFELDT, " " Washington, D.C.

" H. O. PERLEY, " " Fort Columbus, N.Y.H.

Captain H. G. BURTON, Assistant-Surgeon, Fort Hamilton, N.Y.H.

Captain L. M. MAUS, Assistant-Surgeon, at expiration of his present leave of absence, and then to return to his proper station, David's Island, N.Y.

Captains WM. H. CORBUSIER and WM. B. DAVIS, Assistant-Surgeons, at the expiration of their present leave of absence, and upon conclusion of their examination, to report by letter to the Surgeon-General.

S. O. 52, A. G. O., March 13, 1882.

FRANTZ, JOHN H., MAJOR AND SURGEON.—Died at Baltimore, Md., on March 2, 1882.